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ABSTRACT

This is the final report of the Cardston School Division Project for Improvement in the Language Arts, a three-year project in Alberta, Canada, using Exemplary Center for Reading Instruction (ECRI) strategies and materials and having as its objectives the improvement of language arts teaching, student achievement in language arts, students' self-concepts and social relations, and the learning rates of all elementary school students in the division. Following an introductory section, the nine major sections of the report provide information relative to the following: elementary school pupil ability, achievement, and self-concept development in terms of grade score gains or losses and percentile rankings; the faithfulness and consistency of teachers to the ECRI training program and criteria; pupil mastery and speed of learning; the applied written composition of elementary school pupils through analysis and comparisons of measures of the quality and skill in the use of the mechanics of expression; scores and comparisons of the pupils on the Saskatoon Public School Handwriting Scale; a study of the possible outcomes of the project other than those being measured by formal observation and testing; pupil attendance rates; general conclusions reached by the external evaluation team; and recommendations made by that team. (FL)

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THE CARDSTON SCHOOL DIVISION PROJECT FOR THE IMPROVEMENT IN THE LANGUAGE ARTS USING ECRI PROCEDURES

Presented by the External Evaluation Team

Herbert T. Coutts, Canadian Evaluator
Rex A. Wadham, Coordinator
James R. Young, Evaluator
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Alberta Education Planning and Research

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EVALUATION OF THE CARDSTON SCHOOL DIVISION PROJECT FOR THE IMPROVEMENT IN THE LANGUAGE ARTS USING ECRI PROCEDURES

1977-1978 Final Report

Presented to the

Cardston School Division No. 2

July 1978

This report is respectfully submitted

by the External Evaluation Team

July 1978

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PART I

INTRODUCTION

Initial Statement

The purpose of this report is tc provide, at the end of the third and final year of this three-year project, a number of evaluative statements and summaries related in general to the objectives of the project and in particular to agreements reached by representatives of the Cardston School Division No. 2, the Planning and Research Division of the Alberta Department of Education, the Lethbridge Regional Office of Education, and the External Evaluation Team.

Project Objectives

The objectives of the project as originally stated are as follows:

1. To improve the language arts teaching skills of all elementary teachers in the Cardston School Division through specified inservice training.

2. To improve the total language arts skills of all elementary pupils in the Cardston School Division through the utilization of a concise and systematic approach to teaching.

3. To improve the self-image and social relationships of all elementary school pupils in the Cardston School Division through improved academic instruction.

4. To increase the learning rate of all elementary school pupils in the Cardston School Division in the area of the language arts through the use of special training skills and techniques employed by the regular classroom teachers.

December 19, 1977 Agreements

At a meeting held in Edmonton on December 19, 1977, and attended by James Hrabi (Asscciate Deputy Minister of Education for the Province of Alberta), Marvin Bruce (Director of the Lethbridge Regional Office of Education), Grant Matkin (Superintendent of the Cardston School Division), Calvin Durfey (Assistant Superintendent of the Cardston School Division), Harry Sherk (Associate Director of the Planning and Research Division of the Alberta Department of Education), Rex A. Wadham and Alvin Rencher (Brigham Young University), and H. T. Coutts (Professor Emeritus, the University of Alberta) it was agreed as follows as recorded in the minutes of that meeting:

1. That the 1978 report be prepared in such a way that it can be made available as an appropriate and useful document for public distribution, or that it be prepared in such a way that a summary version might be so used. (It was subsequently agreed that the External Evaluation Team would prepare a detailed report as well as a short summary report, the former for the information of the Cardston School Division, the latter for wider distribution.)

2. That the 1978 report draw together and include generalizations already reached on the basis of the 1975-76 and 1976-77 studies and analyses which formed the bases of the 1976 and 1977 reports.
3. That an attempt be made to identify and report outcomes over the three-year period of the Language Arts Improvement Program other than those evaluated by techniques of observation and achievement and self-concept testing.
4. That those teachers previously monitored through the use of TICOR and who are still teaching in the Cardston School Division be monitored again to form the basis of a comparison of present with previous teaching patterns, this to be carried through only if subsequently thought to be useful. (After consultation with the project director, it was decided that the additional monitoring would be unproductive.)
5. That comparisons using the Otis-Lennon Mental Ability Test, the Gates MacGinitie Reading Test, the Stanford Achievement Test, the Canadian Test of Basic Skills, and the self-concept tests previously used be made for the total pupil group in each of Grades I through VI as well as for the Indian, Hutterite, and Other subgroups in these grades on the basis of the initial (1975) and

final (1978) test results. (On the basis of availability of data, some comparisons have been made between 1975 and 1978 groups and subgroups, some between 1976 and 1978 groups and subgroups. The tables in the present report provide a complete summary of ability, achievement, and self-concept test data for 1975 through 1978 to the extent that these are available.)

6. That the data on the 1978 testing program be made available by the Cardston School Division to the Provo-based members of the External Evaluation Team by June 1, 1978.
7. That further attention be given in the 1978 report to retention and learning rate, the approach to be developed by the External Evaluation Team and the Administration of the Cardston School Division. It was suggested that the progress of Indian, Hutterite, and Other pupils be reported.
8. That approximately three mastery tests for spelling be administered through the Lethbridge Regional Office of Education in a school in the Cardston School Division and in a school in another educational jurisdiction. It was suggested that appropriate mastery tests be administered in two grades with three tests being administered to approximately ten pupils in each grade in each school. It was further suggested that the

Lethbridge Regional Office of Education, in consultation with the Cardston School Division, plan, carry through and report to the External Evaluation Team the results of this study for inclusion in the 1978 report. (Subsequently the Lethbridge Regional Office of Education reported to the External Evaluation Team that it was not possible to carry through on this suggestion.)

9. That the tables and graphs on percentage attendance be extended to include 1977-78 data to determine whether there are developing trends.
10. That the Baker-Coutts composition assignments be administered during the first week in April 1978, scored, and the results made available for recording and analysis. (This was done.)
11. That, using samples drawn from the 1975 and 1978 compositions written by Cardston School Division pupils using the Baker-Coutts assignments, an analysis of handwriting be made and included in the 1978 report. (This was done.)
12. That there be a section in the 1978 report devoted to speculations relative to the three-year Language Arts Improvement Program and its results. (The speculations included in the present report are those of the External Evaluation Team.)

Review of the 1975-1976 Reporting Procedures

In the August 1976 report, the initial comparisons of pupil skills were made by grade for total group and for Indian, Hutterite, and Other subgroups. Because it was considered more valid that comparisons be made on the basis of pretest/posttest data of those pupils for whom pretest and posttest scores were available, three additional studies were made and reported as Three Addenda to the August 1976 Report on the Cardston School Division Language Arts Program. These addenda addressed themselves to:

Addendum I: Ability and Achievement Tests: Matched Pretest and Posttest Mean Gain Scores

The summary at the end of Addendum I states that "The basic conclusion to be drawn from the reanalysis is that the matched pretest/posttest method, though more valid in approach than that used in the previous analysis as reported in August 1976, did not identify many large overall differences. The differences were sometimes in a positive, sometimes in a negative direction."

Addendum II: Analysis of Gain Scores of Pretest/ Posttest Matched Pairs by ECRI Groups

The final paragraph of Addendum II reads as follows: "The small number of significant results in the linear column will perhaps be disappointing to those involved in the Cardston School Division Language Arts Project, particularly when the direction of the changes is noted. For

example, out of sixteen (16) significant linear trends, only two (2) are upward; the other fourteen (14) were downward. Thus a consistent tendency for students with more exposure to ECRI-trained teachers to score higher in the competencies being measured did not show in the overall linear trends." The paragraph continues with this more positive statement: ". . . There is thus some evidence of improved gains during the second year of exposure to ECRI-trained teachers."

Addendum III: A Further Evaluation of Teacher Performance

This addendum concludes as follows: "In summary, it would appear that the inservice training given in the pilot and first years of the project had a very clear influence in changing the instructional patterns of the teaching staff of the Cardston School Division as well as in maintaining instructional consistency among the members of the two ECRI-trained groups (Pilot and first year). Whether these patterns maintain themselves throughout the second year of the project will be determined through the 1977 TICOR evaluation data."

Review of the 1976-1977 Reporting Procedures

The 1977 report presented analyses of the development of Cardston School Division elementary school pupils relative to ability, language arts skills, and self-concept based on 1976 pretest and 1977 posttest data. In

addition the results of a study of the language arts teaching skills of seven Cardston School Division teachers judged as showing high fidelity to the ECRI training criteria were reported as were analyses of pupil learning rate and retention. A study of pupil percentage attendance of elementary school pupils in the Cardston School Division was made to examine possible trends and relationships with the Language Arts Improvement Program. This formed part of the 1977 report. Also reported were descriptions and analyses of questionnaire and interview studies designed to test parent and teacher opinion relative to the Language Arts Improvement Program.

Among the conclusions and observations reached in the 1977 report were the following:

1. On the basis of the analysis of the 1976-77 testing program, the External Evaluation Team found little evidence that would attribute gains or losses to any single cause.

2. [The] results confirm the fact that ECRI inservice training has had a measurable effect on teaching procedures and on teacher-pupil interactions.

3. The two procedures used to investigate pupil learning achievement on two criterion measures--pupil retention and pupil learning rate--show that on these two criteria the Indian and Other pupils are comparable.

4. Many factors are responsible for variations in school attendance: weather, health, motivation, and the like. It would seem questionable to make categorical statements about the relationship between any single factor, including the ECRI Training Program, and percentage attendance.

5. The parent questionnaire study showed general satisfaction with respect to the Language Arts

Improvement Program . . . [though some found it] . . . confining and inadequate in meeting individual needs, . . . [felt a need for] . . . more meaningful progress reporting and for closer communication between school and home, . . . [and expressed the opinion that] . . . the quality and personal attributes of the teacher are the most important factors in the teaching-learning process.

6. Both parents and teachers interviewed by the Lethbridge Regional Office of Education were, in general, favorable toward the program, but with reservations similar to those revealed through comments on the questionnaire.

Organization of the 1978 Report

Part I consists of this introduction.

Part II presents information relative to the faithfulness and consistency of teachers to the ECRI Training Program and Criteria.

Part III presents information relative to elementary school pupil ability, achievement, and self-concept development (1975 through 1978) in terms of grade score gains or losses and percentile rankings.

Part IV presents information relative to pupil mastery (retention) and speed of learning.

Part V presents information relative to the applied written composition of elementary school pupils through analyses and comparisons of measures of the quality and skill in the use of the mechanics of expression.

Part VI presents information relative to scores and comparisons of Cardston School Division elementary school pupils on the Saskatoon Public School Handwriting Scale,

the scores being confined to the pupils in Grade IV (1975-76), Grade VI (1975-76), and Grade VI (1977-78).

Part VII presents information relative to a study of possible outcomes of the Cardston School Division Language Arts Improvement Program other than those being measured by formal observation and achievement and self-concept testing.

Part VIII presents information relative to the percentage attendance of elementary school pupils in the Cardston School Division from 1973-74 through 1977-78.

Part IX presents a number of general conclusions reached by the External Evaluation Team as a result of studies, questionnaires, observations, formal testing and other evaluation techniques.

Part X presents a number of recommendations for consideration by the Cardston School Division.

PART II

THE FAITHFULNESS AND CONSISTENCY OF SAMPLES OF SCHOOL DIVISION TEACHERS TO THE ECRI PROGRAM AND CRITERIA

1975-76 Procedures, Observations and Analyses

In the initial report (1976) covering the first year of the Language Arts Improvement Program using ECRI procedures, a detailed analysis was made on the teaching behavior of nine teachers. These teachers were classified into three groups: those who had not received any ECRI training, those who had received one year of ERCI training as an inservice project in the Cardston Schools, and those who had received the inservice training plus an additional training course at Salt Lake City in the prior year. This third group had had an additional year to develop ECRI classroom strategies. This was expected to show up in their teaching performance. It was also anticipated that each of the three groups would have a distinctive instructional style as a group and that that style would be reflected in pupil response patterns.

Measurements were taken using a direct observational approach based on the use of a microcomputer system identified in the 1976 report as the TICOR system. The

major teacher variables used in the observations were: (1) teacher checks pupil responses (both written and oral), (2) teacher questions, (3) teacher provides instruction, (4) teacher directs the learning task, (5) teacher explains, and (6) teacher provides reinforcement. Pupil variables used were: (1) pupil is correct, (2) other learner is correct, and (3) pupil or other learner asks a question. The last variable referred to above was meant to provide an indicator of the freedom being allowed the pupil to initiate a question in response to the teacher's instruction. Pupil or other learner is incorrect, did not respond or was off task were other variables used.

A number of complex analyses were carried out on the observed and recorded data in order to determine the nature of the interaction profile for each of the three groups. The analyses are all included in the 1976 report of the external evaluation team to the Cardston School Division. It would, however, be of interest to the reader of this third and final report on the Language Arts Improvement Program to review the highlights of those findings. It should be remembered that one of the four evaluation tasks facing the external evaluation team was to determine whether there was an improvement in the language arts teaching skills of the elementary school teachers in the Cardston School Division through specific inservice ECRI training.

Improvement was interpreted by the evaluation team to mean those changes in teacher behaviors that were congruent with the inservice instruction provided by the ECRI clinic staff.

The ECRI training had been provided to teachers in the form of direct in-classroom instruction by the ECRI clinical staff as well as through workshop experiences. The external evaluation team was unable to obtain from the ECRI staff a representative profile of the ECRI training model. This meant that the variables used in obtaining direct observational data are at best a somewhat limited representation of what was taught. Nor was the external evaluation team able to determine the consistency of the ECRI training between teachers over time and over changes in ECRI clinic staff members.

In its initial (1976) report, the external evaluation team found, however, that through the use of the TICOR observational system the instructional style of each group was distinctly different. The teachers with no ECRI training evidenced very limited instructional styles when compared with their two counterparts who had had ECRI training. This was especially true of the response opportunities being afforded to each individual pupil. On comparing the two groups of ECRI-trained teachers, the external evaluation team found that those teachers who had been allowed to mature in the ECRI program through the prior experience at Salt Lake City had a less

intensive ECRI profile than had their one-year trained counterparts. The response opportunities being offered to those pupils under the tutelage of the one-year ECRI-trained group were much more intensive than were those of the other trained group. These findings suggest that intensive inservice training, such as the ECRI training program provides, does produce on the part of the teacher an over-reaction to certain aspects of the training which in time tends to settle down to a level consistent with natural ability.

1976-77 Procedures, Observations and Analyses

In the second year of the project (1976-77) the external evaluation team elected to monitor a fourth group of teachers in the project. These were teachers who had reached a level of ECRI maturity that marked them as being qualified as having fidelity to the inservice ECRI trainingprogram. Fidelity to the ECRI procedures was adjudged by the ECRI clinic staff as being applied to a teacher considered to be representative of a fully-trained ECRI practitioner. Seven teachers so classified were observed using the same variables and TICOR procedures followed in the observations of the previous year. Analyses of these data, when compared with the data compiled on the three groups of teachers in the previous year (1975-76) suggested that the fidelity of teacher performance to ECRI training procedures was very high.

In fact, as a group. their instructional profile was statistically different from those of the three groups observed in the 1975-76 study. The seven teachers in the 1976-77 group had had by the end of 1977 an additional year of inservice ECRI training and classroom experience.

Summary

In summary, the direct observation of the classroom performance of sampled teachers carried through for the external evaluation team to assess improvement in the language arts teaching skills of the Cardston School Division elementary school teachers showed that the behaviors of those teachers had changed in a positive direction in so far as ECRI procedures were concerned. Those Cardston School Division elementary school teachers observed with TICOR have become much more physically active and are providing more frequent opportunities for the individual learner to respond. This means that they are also asking more questions, providing more explanations and instruction, and giving more positive reinforcement through praise. All of this has lead to increased classroom learning activities on the part of the pupils. The increase in activity both on the part of the teachers and pupils has been reflected both positively and negatively in the parent/teacher study reported below in Part VII of this report.

The external evaluation team suggests that the findings from observations made in 1975-76 and 1976-77 be viewed as positive outcomes of the ECRI training program since normative measures such as those found in the standardized reading test administered as part of the overall evaluation often fail to measure true differences in learning gains. The direct observational data show that the ECRI-trained teachers do provide a richer response and feedback environment for their pupils than do their untrained counterparts. This fact alone is a plus for the Language Arts Improvement Program.

It should be noted that a direct observational procedure of teacher/pupil classroom performance was not carried through during the final (1977-78) year of the project since it was decided that the information needed to evaluate teacher faithfulness to the ECRI training program had already been obtained.

PART III

COMPARISON OF 1978 POSTTEST SCORES WITH INITIAL (1975 OR 1976) PRETEST SCORES

Introduction

This part of the 1977-78 report presents a comparison of the 1978 posttest scores for pupils tested in June of this year with the pretest pupil scores from the 1975 or in some instances the 1976 testing, whichever was applicable. Only test scores that could validly be compared were used in this final comparison. Comparisons were made for the Otis-Lennon Mental Abilities Test, the Gates-MacGinitie Reading Tests, the Stanford Achievement Tests, the Canadian Test of Basic Skills, and the Pictorial and Piers-Harris Self-Concept Tests. Included in the tables following are comparable test scores from each of the testings made during the Cardston School Division Language Arts Improvement Project. This will give the reader a year-by-year comparison of the project. The following narrative focuses on the beginning 1975-76 data compared with the final 1977-78 data. These data provide highlights only relative to general overall trends. The reader may wish to make a further study of Tables 1 through 14 for more detailed findings.

Table 1

Otis-Lennon Mental Ability Test Data by Grade, Ethnic

Pre- and Posttest Mean Gain Scores

Group		1975			1976			1977			1978			Differences ('78-'75,'76)	
Grade	Ethnic	DIQ Mean	%	N	DIQ Mean	%	N	DIQ Mean	%	N	DIQ Mean	%	N	Mean	%
I	Total	97.0	43	232	102.8	57	206	105.8	65	251	104.6	62	236	+ 7.60	+19
	1	85.3	17	62	95.8	40	58	92.8	33	54	93.9	35	67	+ 8.60	+18
	2	77.2	8	23	75.2	6	20	75.8	7	25	76.3	7	12	- .90	- 1
	3	105.0	62	147	110.3	73	128	114.2	81	172	111.4	75	157	+ 6.40	+13
II	Total	99.6	50	191	101.9	55	237	100.1	50	216	104.0	60	254	+ 4.40	+10
	1	89.7	27	43	90.7	29	71	92.1	31	63	90.7	29	51	+ 1.00	+ 2
	2	77.3	8	20	80.4	11	24	78.6	10	19	82.4	13	25	+ 5.10	+ 5
	3	106.4	65	128	111.1	75	142	106.9	67	134	110.9	75	178	+ 4.50	+10
III	Total	97.0	43	212	104.6	62	218	102.1	55	244	103.2	57	224	+ 6.20	+14
	1	84.1	16	30	95.2	38	55	92.2	31	63	94.8	38	64	+10.70	+22
	2	79.6	11	22	83.6	16	19	80.8	12	23	82.5	14	19	+ 2.90	+ 3
	3	101.8	55	160	111.0	75	144	109.1	71	158	109.8	73	141	+ 8.00	+18
IV	Total	97.7	45	178	102.1	55	221	101.2	52	225	99.4	48	253	+ 1.70	+ 3
	1	89.9	27	56	92.7	33	48	88.5	25	61	84.9	17	59	- 5.00	-10
	2	84.5	17	21	81.5	13	19	84.7	17	19	79.7	11	24	- 4.80	- 6
	3	104.8	62	101	107.8	69	145	108.6	71	145	107.2	67	170	+ 2.40	+ 5
V	Total	98.6	48	230	101.5	55	222	101.9	55	224	102.7	57	225	+ 4.10	+ 9
	1	86.5	21	55	89.2	25	63	87.1	21	43	90.5	29	58	+ 4.00	+ 8
	2	83.8	16	27	85.6	19	18	81.8	13	22	87.8	23	19	+ 4.00	+ 7
	3	105.8	65	148	109.0	71	141	108.7	71	159	109.3	71	148	+ 3.50	+ 6
VI	Total				102.1	55	246	101.1	52	226	103.4	57	228	+ 1.30	+ 2
	1				92.3	31	60	88.1	23	66	90.2	27	43	- 2.10	- 4
	2				85.5	19	27	85.7	19	21	82.2	13	22	- 3.30	- 6
	3				108.6	71	159	109.5	73	139	109.8	73	163	+ 1.20	+ 2

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here = percentile

Table 2

Gates-MacGinitie Reading Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 1: Vocabulary

Group		1975				1976				1977				1978				Differences ('78-'75-'76)		
Grade	Ethnic	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score
I	Total					31.5	34	1.7	207	35.3	42	1.9	253	33.0	38	1.8	238	+1.5	+4	+.1
	1					26.1	18	1.6	59	28.2	21	1.6	54	26.4	18	1.6	68	- .3	0	0
	2					27.2	21	1.6	20	24.7	16	1.5	26	23.9	14	1.5	12	-3.3	-7	-.1
	3					34.7	42	1.9	128	39.2	58	2.3	173	36.5	50	2.1	158	+1.8	+8	+.2
II	Total					30.9	42	2.6	235	32.6	46	2.8	216	33.2	46	2.8	252	+2.3	+4	+.2
	1					24.4	21	2.0	69	26.6	27	2.4	63	24.5	24	2.3	50	+1.1	+3	+.3
	2					16.6	8	1.5	24	19.4	12	1.6	19	20.7	16	1.7	25	+4.1	+8	+.2
	3					36.5	58	3.5	142	37.2	58	3.5	134	37.4	58	3.5	177	+ .9	0	0
III	Total					34.5	50	3.9	208	32.3	38	3.5	244	33.1	42	3.6	223	-1.4	-8	-.3
	1					28.7	31	3.2	49	24.6	21	2.8	61	26.6	24	3.0	62	-2.1	-7	-.2
	2					27.3	24	3.0	19	21.3	12	2.4	23	24.9	21	2.8	19	-2.4	-3	-.2
	3					37.5	62	4.4	140	36.8	58	4.2	160	37.0	58	4.2	142	- .5	-4	-.2
IV	Total	24.3	42	4.5	175	25.0	46	4.7	211	25.3	46	4.7	223	24.8	46	4.7	254	+ .5	+4	+.2
	1	17.9	21	3.7	56	20.5	31	4.1	47	20.7	31	4.1	59	18.2	21	3.7	60	+ .3	0	0
	2	18.9	24	3.9	21	16.8	16	3.6	20	17.7	21	3.7	19	16.0	14	3.5	24	-2.9	-10	-.4
	3	29.1	62	5.3	98	27.6	58	5.1	144	28.1	58	5.1	145	28.4	58	5.1	170	- .7	-4	-.2
V	Total	29.1	42	5.3	233	28.5	42	5.3	224	29.3	42	5.3	215	28.2	39	5.1	236	- .9	-4	-.2
	1	23.8	24	4.5	58	22.7	21	4.4	65	24.9	27	4.7	36	22.7	21	4.4	68	-1.1	-3	-.1
	2	21.9	18	4.2	26	19.4	12	3.9	18	19.0	12	3.9	22	21.3	16	4.1	19	- .6	-2	-.1
	3	32.4	54	6.0	149	32.3	54	6.0	141	31.8	54	6.0	157	31.6	54	6.0	149	- .8	0	0
VI	Total					31.4	31	5.8	247	31.2	31	5.8	223	32.2	38	6.0	229	+ .8	+7	+.2
	1					26.6	18	5.0	60	24.7	14	4.7	63	26.0	16	4.8	43	- .6	-2	-.2
	2					22.3	10	4.2	26	23.8	14	4.5	20	23.8	14	4.5	22	+1.5	+4	+.3
	3					34.6	54	7.0	161	35.1	54	7.0	140	34.9	54	7.0	164	+ .3	0	0

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 3

Gates-MacGinitie Reading Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 2: Speed and Accuracy

Group		1975				1976				1977				1978				Differences ('78-'75-'76)		
Grade	Ethnic	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	X	%	Grade Score
IV	Total	12.6	38	4.5	175	14.0	46	4.8	209	16.6	69	5.9	223	13.0	38	4.5	254	+ .4	0	0
	1	8.6	14	3.5	56	10.2	18	3.8	47	13.5	46	4.8	59	8.9	14	3.5	60	+ .2	0	0
	2	12.9	38	4.5	21	11.7	31	4.3	20	12.3	31	4.3	19	10.0	18	3.5	24	-2.9	-20	-.7
	3	14.7	54	5.1	98	15.6	62	5.5	142	18.4	73	6.5	145	14.9	54	5.1	170	+ .2	0	0
V	Total	16.7	50	5.9	233	16.3	46	5.5	224	17.2	50	5.9	215	16.7	50	5.9	235	0	0	0
	1	13.7	38	4.8	58	12.5	31	4.5	65	14.8	42	5.1	36	13.1	31	4.5	67	- .6	- 7	-.3
	2	15.2	42	5.1	26	15.3	42	5.1	18	12.9	31	4.5	22	16.4	46	5.5	19	+1.2	+ 4	+.4
	3	18.1	58	6.5	149	18.2	58	6.5	141	18.3	58	6.5	157	18.3	58	6.5	149	+ .2	0	0
VI	Total					18.9	50	7.1	247	18.5	50	7.1	223	19.4	50	7.1	229	+ .5	0	0
	1					13.6	18	4.8	60	13.4	16	4.5	63	15.2	24	5.1	43	+1.6	+ 6	+.3
	2					18.4	42	6.5	76	18.0	42	6.5	20	14.5	24	5.1	22	-3.9	-18	-1.4
	3					20.9	62	8.4	161	20.8	62	8.4	140	21.2	62	8.4	164	+.3	0	0

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 4

Gates-MacGinite Reading Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 3: Comprehension

Group		1975				1976				1977				1978				Differences ('78-'75-'76)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	X	%	Grade Score
I	Total					16.7	34	1.6	202	20.3	46	1.8	253	18.0	38	1.7	236	+1.3	+4	+.2
	1					13.6	21	1.5	57	14.1	21	1.5	54	13.3	16	1.5	66	- .3	-5	0
	2					14.5	24	1.6	19	13.2	16	1.5	26	13.3	16	1.5	12	-1.2	-8	-.1
	3					18.3	38	1.7	126	23.4	62	2.1	173	20.3	46	1.8	158	+2.0	+8	+.1
II	Total					19.4	31	2.5	234	21.0	38	2.6	216	21.6	42	2.7	252	+2.2	+11	+.2
	1					13.9	14	1.9	68	16.0	18	2.2	63	15.2	16	2.1	50	+1.3	+2	+.2
	2					11.4	8	1.6	24	13.3	12	1.8	19	13.5	14	1.9	25	+2.1	+6	+.3
	3					23.4	46	2.8	142	24.4	50	3.1	134	24.6	58	3.4	177	+1.2	+12	+.6
III	Total					28.7	42	3.6	208	27.3	38	3.4	242	27.8	42	3.5	222	- .9	0	-.1
	1					22.9	27	3.0	49	17.9	16	2.5	61	20.8	24	2.8	61	-2.1	-3	-.2
	2					19.8	21	2.6	19	16.3	12	2.3	23	16.7	14	2.4	19	-3.1	-7	-.2
	3					32.0	50	4.1	140	32.5	54	4.3	158	32.2	50	4.1	142	+ .2	0	0
IV	Total	24.9	34	4.2	176	26.0	38	4.4	211	25.6	38	4.4	222	26.5	38	4.5	253	+1.6	+4	+.3
	1	17.5	18	3.4	56	20.5	24	3.8	47	19.7	21	3.7	58	16.8	16	3.3	59	- .7	-2	-.1
	2	19.4	21	3.5	21	16.0	14	3.2	20	16.8	16	3.3	19	17.9	18	3.4	24	-1.5	-3	-.1
	3	30.3	50	4.8	99	29.1	46	4.7	144	29.1	46	4.7	145	31.1	50	4.9	170	+ .8	0	+.1
V	Total	31.9	34	5.0	231	31.3	31	4.9	224	31.8	34	5.0	215	30.8	31	4.9	236	-1.1	-3	-.1
	1	24.0	18	4.1	58	23.6	18	4.1	65	24.9	21	4.2	36	24.0	18	4.1	68	0	0	0
	2	24.1	18	4.1	26	20.8	14	3.8	18	20.6	14	3.8	22	23.2	18	4.0	19	- .9	0	-.1
	3	36.4	46	5.6	147	36.3	46	5.6	141	34.9	42	5.5	157	34.8	42	5.5	149	-1.6	-4	-.1
VI	Total					34.5	31	5.5	246	33.8	27	5.3	223	35.9	31	5.6	229	+1.4	0	+.1
	1					28.6	18	4.7	60	24.4	12	4.1	63	27.4	16	4.5	43	-1.2	-2	-.2
	2					24.9	14	4.2	26	26.2	14	4.4	20	25.5	14	4.4	22	+.6	0	+.2
	3					38.2	38	6.0	160	39.2	42	6.2	140	39.6	46	6.5	164	+1.4	+8	+.5

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 5

Stanford Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Primary I

Group		1976				1977				1978						
Test	Ethnic	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score	N	$\bar{X}$	%	Grade Score
Word Reading	Total	19.5	26	1.7	209	21.2	38	1.8	253	20.9	38	1.8	233	+1.4	+12	+.1
	1	16.0	18	1.6	61	15.5	18	1.6	55	16.7	18	1.6	65	+ .7	0	0
	2	14.1	11	1.5	20	14.6	11	1.5	25	14.7	11	1.5	12	+ .6	0	0
	3	22.1	38	1.8	128	23.9	50	1.9	173	23.1	50	1.9	156	+1.0	+12	+.1
Para Meaning	Total	15.0	12	1.6	201	17.5	24	1.7	245	16.2	12	1.6	229	+1.2	0	0
	1	10.8	8	1.5	53	8.5	4	1.4	49	10.5	8	1.5	62	- .3	0	0
	2	13.8	12	1.6	20	15.5	12	1.6	24	14.4	12	1.6	12	+ .6	0	0
	3	17.0	25	1.7	128	20.4	24	1.7	172	18.6	24	1.7	155	+1.6	+ 1	0
Spelling	Total	9.7	34	1.7	204	11.5	50	1.9	246	9.4	34	1.7	228	- .3	0	0
	1	8.4	24	1.6	56	7.7	24	1.6	53	6.4	18	1.5	64	-2.0	- 6	-.1
	2	9.1	34	1.7	20	13.6	62	2.1	22	7.2	24	1.6	12	-1.9	-10	-.1
	3	10.3	34	1.7	128	12.4	50	1.9	171	10.8	42	1.8	152	+ .5	+ 8	+.1
Word Study	Total	36.3	50	1.9	207	37.1	50	1.9	254	37.3	50	1.9	230	+1.0	0	0
	1	33.3	36	1.7	59	31.3	30	1.6	55	33.0	36	1.7	63	- .3	0	0
	2	28.5	22	1.5	20	21.8	8	1.3	26	31.9	30	1.6	12	+3.4	+ 8	+.1
	3	38.9	58	2.0	128	41.3	70	2.2	173	39.5	64	2.1	155	+ .6	+ 6	+.1
Vocabulary	Total	18.7	44	1.8	209	20.5	54	2.0	252	18.8	44	1.8	234	+ .1	0	0
	1	15.1	24	1.5	61	14.6	24	1.5	54	14.4	14	1.4	67	- .7	-10	-.1
	2	13.0	14	1.4	20	13.2	14	1.4	25	13.8	14	1.4	12	+ .8	0	0
	3	21.3	54	2.0	128	23.3	64	2.2	173	21.1	54	2.0	155	- .2	0	0

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 6

Stanford Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Primary II

Group		1976				1977				1978				Differences ('78-'76)		
Test	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
Word Meaning	Total	16.5	38	2.7	228	17.1	38	2.7	214	18.3	44	2.8	251	+1.8	+6	+.1
	1	11.5	16	2.1	64	12.4	16	2.1	61	12.5	20	2.3	47	+1.0	+4	+.2
	2	10.7	12	2.0	23	15.7	38	2.7	19	13.3	20	2.3	26	+2.6	+8	+.3
	3	19.7	60	3.1	141	19.5	56	3.0	134	20.5	60	3.1	178	+ .8	0	0
Para Meaning	Total	27.5	40	2.7	231	28.1	40	2.7	215	30.3	44	2.8	252	+2.8	+4	+.1
	1	19.3	16	2.1	66	20.2	18	2.2	62	19.3	16	2.1	48	0	0	0
	2	18.0	12	2.0	24	18.5	16	2.1	19	17.5	12	2.0	26	- .5	0	0
	3	33.0	54	3.0	141	33.1	54	3.0	134	35.1	60	3.1	178	+2.1	+6	+.1
Spelling	Total	13.3	54	3.0	224	14.7	62	3.2	212	15.2	62	3.2	250	+1.9	+8	+.2
	1	9.1	34	2.5	61	10.6	46	2.8	61	9.1	34	2.5	47	0	0	0
	2	8.0	30	2.4	24	16.2	66	3.3	18	12.0	50	2.9	26	+4.0	+20	+.5
	3	16.0	66	3.3	141	16.4	66	3.3	133	17.3	70	3.4	177	+1.3	+4	+.1
Word Study	Total	35.1	46	2.8	231	34.9	46	2.8	215	35.2	46	2.8	252	+ .1	0	0
	1	24.6	18	2.0	66	27.1	23	2.2	62	24.4	18	2.0	48	- .2	0	0
	2	24.0	18	2.0	24	23.8	18	2.0	19	27.8	26	2.3	26	+3.8	+8	+.3
	3	41.8	64	3.5	141	40.0	58	3.3	134	39.2	56	3.2	178	-2.6	-8	-.3
Language	Total	34.4	34	2.6	230	35.8	44	2.8	215	37.8	50	2.9	252	+3.4	+16	+.3
	1	27.8	14	2.2	65	30.5	23	2.4	62	31.0	23	2.4	48	+3.2	+9	+.2
	2	30.0	23	2.4	24	29.2	18	2.3	19	32.0	28	2.5	26	+2.0	+5	+.1
	3	38.3	50	2.9	141	39.1	54	3.0	134	40.4	60	3.1	178	+2.1	+10	+.2

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 7

Canadian Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 1: Vocabulary

Group		1975				1976				1977				1978				Differences ('78-'75-'76)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
III	Total	19.6	32	3.6	198	18.1	21	3.4	217	17.6	21	3.4	254	17.8	21	3.4	224	-1.8	-11	-.2
	1	13.0	6	2.9	26	13.0	6	2.9	54	11.4	2	2.6	63	12.5	6	2.9	63	- .5	0	0
	2	11.6	4	2.8	21	11.9	4	2.8	19	11.1	2	2.6	23	14.5	11	3.1	19	+2.9	+ 7	+.3
	3	21.9	49	3.8	151	20.9	40	3.7	144	21.1	40	3.7	159	20.6	40	3.7	142	-1.3	- 9	-.1
IV	Total	21.7	24	4.4	159	20.7	20	4.3	209	21.1	20	4.3	223	21.5	24	4.4	254	+ .2	0	0
	1	14.1	--	3.1	39	14.0	--	3.1	44	15.8	2	3.5	60	14.1	--	3.1	61	0	--	0
	2	12.2	--	2.7	20	12.3	--	2.7	20	13.5	--	3.1	19	14.4	--	3.1	24	+2.2	--	+.4
	3	26.5	78	5.2	100	24.0	43	4.7	145	24.3	43	4.7	144	25.1	59	4.9	169	-1.4	-19	-.3
V	Total	22.1	27	5.4	192	21.0	22	5.3	223	22.5	33	5.5	211	21.1	22	5.3	227	-1.0	- 5	0.1
	1	14.9	1	4.3	43	13.2	--	3.8	64	14.6	1	4.3	33	15.2	1	4.3	60	+ .3	0	0
	2	14.1	--	4.1	22	11.9	--	5.6	18	12.7	--	3.8	22	12.8	--	3.8	19	-1.3	--	-.3
	3	26.0	58	5.9	127	25.8	48	5.9	141	25.6	58	5.9	156	24.5	51	5.8	148	-1.5	- 7	-.1
VI	Total					22.0	21	6.2	239	22.1	21	6.2	222	23.4	25	6.3	213	+1.4	+ 4	+.1
	1					16.0	2	5.2	52	15.0	--	5.0	63	14.0	--	4.8	34	-2.0	- 2	-.4
	2					10.6	--	4.0	27	13.7	--	4.8	21	13.2	--	4.5	22	+2.6	--	+.5
	3					25.9	41	6.6	160	26.6	47	6.7	138	26.9	47	6.7	157	+1.0	+ 6	+.1

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 8

Canadian Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 2: Reading Comprehension

Group		1975				1976				1977				1978				Differences ('78-'75,'76)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
III	Total	27.2	40	3.8	198	26.4	32	3.7	217	25.9	32	3.7	244	24.8	25	3.6	224	-2.4	-15	-.2
	1	17.4	--	2.7	26	19.0	3	3.0	54	15.7	--	2.6	63	17.6	1	2.8	63	- .2	+ 1	+.1
	2	16.1	--	2.6	21	16.3	--	2.6	19	16.1	--	2.6	23	17.2	--	2.7	19	+1.1	---	+.1
	3	30.4	60	4.0	151	30.5	70	4.1	144	31.3	70	4.1	158	29.0	60	4.0	142	-1.4	0	0
IV	Total	31.4	20	4.4	159	32.5	25	4.5	210	33.0	25	4.5	224	32.6	25	4.5	254	+1.2	+ 5	+.1
	1	20.3	--	3.4	39	23.5	3	3.8	45	24.2	3	3.8	61	21.0	1	3.5	61	+ .7	+ 1	+.1
	2	21.0	1	3.5	20	21.0	1	3.5	20	19.9	--	3.4	19	22.3	2	3.6	24	+1.3	+ 1	+.1
	3	37.8	52	4.9	100	36.9	43	4.8	145	38.4	52	4.9	144	38.2	52	4.9	169	+ .4	0	0
V	Total	36.5	20	5.3	193	36.1	17	5.2	223	36.0	17	5.2	222	35.5	17	5.2	229	-1.0	- 3	-.1
	1	25.0	2	4.4	44	25.6	3	4.5	64	24.4	1	4.3	41	25.4	2	4.4	60	+ .4	0	0
	2	24.1	1	4.3	22	21.9	--	4.0	18	23.5	1	4.3	22	25.4	2	4.4	19	+ .7	+ 1	+.1
	3	42.6	39	5.7	127	42.6	39	5.7	141	40.7	33	5.6	159	40.8	33	5.6	150	-1.8	- 6	-.1
VI	Total					33.9	13	6.0	237	33.7	13	6.0	222	35.6	19	6.2	213	+1.7	+ 6	+.2
	1					25.4	1	5.1	52	23.9	--	4.9	63	25.5	2	5.2	34	+ .1	+ 1	+.1
	2					21.7	--	4.6	27	23.4	--	4.8	21	21.0	--	4.4	22	- .7	---	-.2
	3					38.8	31	6.5	158	39.7	31	6.5	138	39.8	31	6.5	157	-1.0	0	0

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 9

Canadian Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 3: Spelling

Group		1975				1976				1977				1978				Differences ('78-'75,'76)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
III	Total	20.5	32	3.8	198	18.6	13	3.4	215	18.1	8	3.2	240	18.2	8	3.2	221	-2.3	-24	-.6
	1	18.2	8	3.2	26	13.4	--	2.5	53	13.2	--	2.5	58	13.9	2	2.7	59	-4.3	- 6	-.5
	2	14.7	2	2.8	21	16.2	3	2.9	19	13.8	2	2.7	23	15.1	2	2.8	19	+ .4	0	0
	3	21.7	48	4.0	151	20.9	32	3.8	143	20.4	21	3.6	159	20.5	32	3.8	143	-1.2	- 4	-.2
IV	Total	23.5	18	4.4	159	22.0	7	4.0	209	21.9	7	4.0	222	21.6	7	4.0	253	-1.9	-11	-.4
	1	17.6	--	3.4	39	20.0	3	3.7	45	18.8	2	3.6	58	15.8	--	3.2	60	-1.8	---	-.2
	2	22.5	12	4.2	20	17.5	--	3.4	20	19.7	3	3.7	19	16.8	--	3.3	24	-5.7	-12	-.9
	3	25.9	40	4.8	100	23.3	12	4.2	144	23.5	18	4.4	145	24.4	18	4.4	169	-1.5	-22	-.4
V	Total	24.7	24	5.4	186	22.3	8	4.9	223	23.3	13	5.1	212	21.6	8	4.9	227	-3.1	-16	-.5
	1	19.3	--	4.3	38	17.8	--	4.1	64	20.3	2	4.5	34	17.6	--	4.1	59	-1.7	---	-.2
	2	25.3	24	5.4	22	20.1	2	4.5	18	18.3	--	4.1	22	19.1	--	4.3	19	-6.2	-24	-1.1
	3	26.3	34	5.6	126	24.7	24	5.4	141	24.7	24	5.4	156	23.5	20	5.3	149	-2.8	-14	-.3
VI	Total					23.0	15	6.0	242	21.7	9	5.8	226	23.3	15	6.0	216	+ .3	0	0
	1					19.9	3	5.4	54	17.3	--	4.8	66	19.3	1	5.2	37	- .6	- 2	-.2
	2					19.0	1	5.2	27	19.7	3	5.4	21	17.5	--	5.0	22	-1.5	- 1	-.2
	3					24.7	26	6.3	161	24.2	22	6.2	139	25.1	26	6.3	157	+ .4	0	0

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

Table 10

Canadian Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 4: Capitalization

Group		1975				1976				1977				1978				Differences ('78-'76,'75)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
III	Total	18.5	15	3.3	198	17.1	7	3.0	213	16.7	7	3.0	242	17.5	12	3.2	222	-1.0	- 3	-.1
	1	12.9	1	2.5	26	12.1	--	2.4	51	11.7	--	2.4	59	12.8	1	2.5	60	- .1	0	0
	2	12.6	1	2.5	21	12.8	1	2.5	19	14.9	4	2.8	23	14.5	4	2.8	19	+1.9	+ 3	+.3
	3	20.3	23	3.5	151	19.5	23	3.5	143	18.8	15	3.3	160	19.8	23	3.5	143	- .5	0	0
IV	Total	21.3	5	3.8	159	20.0	3	3.6	209	20.0	3	3.6	221	20.4	3	3.6	251	- .9	- 2	-.2
	1	14.4	--	2.7	39	17.4	--	3.2	45	15.3	--	2.9	57	14.4	--	2.7	60	0	---	0
	2	16.9	--	3.2	20	15.5	--	3.1	20	16.6	--	3.2	19	16.1	--	3.1	24	- .8	---	-.1
	3	24.9	31	4.6	100	21.6	8	4.0	144	22.4	8	4.0	145	23.1	14	4.2	167	-1.8	-17	-.4
V	Total	20.7	3	4.6	187	20.1	2	4.4	233	20.8	3	4.6	211	20.3	2	4.4	227	- .4	- 1	-.2
	1	13.2	--	3.2	39	14.0	--	3.4	63	14.2	--	3.4	34	14.8	--	3.6	59	+1.6	---	+.4
	2	18.2	--	4.1	22	15.4	--	3.6	18	16.9	--	3.9	22	17.0	--	3.9	19	-1.2	---	-.2
	3	23.4	10	5.0	126	23.5	16	5.2	141	22.9	10	5.0	155	22.9	10	5.0	149	- .5	0	0
VI	Total					19.4	--	5.1	242	18.2	--	4.9	226	20.6	4	5.5	216	+1.2	+ 4	+.4
	1					15.8	--	4.5	54	12.7	--	3.9	66	14.4	--	4.1	37	-1.4	---	-.4
	2					15.0	--	4.3	27	17.3	--	4.7	21	17.6	--	4.9	22	+2.6	---	+.6
	3					21.4	4	5.5	161	20.9	4	5.5	139	22.5	13	6.0	157	+1.1	+ 9	+.5

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represent percentile

Table 11

Canadian Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 5: Punctuation

Group		1975				1976				1977				1978				Differences ('78-'75,'76)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
III	Total	15.5	44	3.9	198	14.7	26	3.7	214	14.2	14	3.5	241	15.1	26	3.7	222	- .4	-18	-.2
	1	12.5	7	3.3	26	11.3	1	2.9	52	9.8	--	2.7	59	11.1	1	2.9	60	-1.4	- 6	-.4
	2	11.8	3	3.1	21	12.2	3	3.1	19	12.6	7	3.3	23	14.6	26	3.7	19	+2.8	+23	+.6
	3	16.6	64	4.1	151	16.3	44	3.9	142	16.1	44	3.9	159	16.9	64	4.1	143	+ .3	0	0
IV	Total	19.6	44	4.8	159	18.0	22	4.5	209	17.4	17	4.4	222	17.8	22	4.5	253	-1.8	-22	-.3
	1	12.9	--	3.6	39	15.2	4	4.0	45	13.1	--	3.6	58	11.8	--	3.4	60	-1.1	---	+.2
	2	14.8	4	4.0	20	13.8	1	3.8	20	14.6	4	4.0	19	15.2	4	4.0	24	+ .4	0	0
	3	23.2	80	5.4	100	19.5	44	4.8	144	19.6	44	4.8	145	20.3	44	4.8	169	-2.9	-36	-.6
V	Total	20.6	32	5.6	190	19.1	11	5.2	221	19.5	20	5.4	212	18.9	11	5.2	227	-1.7	-21	-.4
	1	14.4	--	4.3	43	13.6	--	4.3	63	15.9	1	4.7	34	13.7	--	4.3	59	- .7	---	0
	2	18.2	6	5.0	21	14.5	--	4.5	18	15.2	--	4.5	22	17.7	6	5.0	19	- .5	0	0
	3	23.1	55	5.9	126	22.2	47	5.8	140	20.9	32	5.6	156	21.1	32	5.6	149	-2.0	-23	-.3
VI	Total					18.1	4	5.7	241	18.1	4	5.7	226	18.6	6	5.9	216	+ .5	+ 2	+.2
	1					14.3	--	5.0	54	13.3	--	4.7	66	13.2	--	4.7	37	-1.1	---	-.3
	2					15.4	--	5.2	27	17.1	2	5.6	21	17.6	4	5.7	22	+2.2	+ 4	+.5
	3					19.8	12	6.1	160	20.5	18	6.3	139	20.0	12	6.1	157	+ .2	0	0

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

% here represents percentile

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Table 12

Canadian Achievement Test Data by Grade and Ethnic Group
Pre- and Posttest Mean Gain Scores
Test 6: Word Usage

Group		1975				1976				1977				1978				Differences ('78-'75,'76)		
Grade	Ethnic	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score	N	Mean	%	Grade Score
III	Total	17.8	24	3.5	195	17.6	24	3.5	213	17.0	17	3.4	235	16.7	17	3.4	222	-1.0	- 7	-.4
	1	11.5	2	2.7	26	10.9	1	2.6	52	10.6	1	2.6	55	11.4	1	2.6	60	- .1	- 1	-.1
	2	14.2	5	3.0	21	11.4	1	2.6	19	11.0	1	2.6	23	13.8	5	3.0	19	- .4	0	0
	3	19.4	32	3.6	148	20.8	50	3.8	142	20.1	40	3.7	157	19.3	32	3.6	143	- .1	0	0
IV	Total	17.4	14	4.1	14	17.1	14	4.1	209	17.8	18	4.2	221	17.8	18	4.2	253	+ .4	+ 4	+.1
	1	10.7	--	3.1	---	12.3	--	3.2	45	13.6	1	3.5	57	12.1	--	3.2	60	+1.4	---	+.1
	2	15.1	4	3.7	4	12.7	--	3.4	20	12.9	--	3.4	19	13.2	--	3.4	24	-1.9	- 4	-.3
	3	20.6	45	4.7	38	19.2	26	4.4	144	20.1	38	4.6	145	20.4	38	4.6	169	- .2	- 7	-.1
V	Total	18.1	11	4.9	191	17.3	7	4.7	221	18.7	22	5.2	212	17.4	7	4.7	227	- .7	- 4	-.2
	1	12.3	--	3.8	44	12.1	--	3.8	63	13.4	--	3.9	34	13.0	--	3.9	59	+ .7	---	+.1
	2	17.1	7	4.7	21	15.9	3	4.5	18	13.6	--	4.1	22	16.6	7	4.7	19	- .5	0	0
	3	20.2	30	5.4	126	20.0	30	5.4	140	20.5	41	5.6	156	19.3	22	5.2	149	- .9	- 8	-.2
VI	Total					15.7	5	5.5	241	15.7	5	5.5	225	17.4	11	5.8	216	+1.7	+ 6	+.3
	1					12.2	--	4.5	54	11.2	--	4.2	65	10.7	--	4.2	37	-1.5	---	-.3
	2					12.7	--	4.7	27	14.8	2	5.3	21	14.0	--	5.0	22	+1.3	---	+.3
	3					17.4	11	5.8	160	18.0	18	6.0	139	19.5	40	6.5	157	+2.1	+29	+.7

ETHNIC GROUPS
1. Indian
2. Mutterite
3. Other

% here represents percentile

Table 13

Pupil Self Concept Test Data by Grade and Ethnic Group
Matched Pre- and Posttest Mean Gain Scores
Pictorial Self Concept Test

Group		1975		1976		1977		1978		Differences ('78-'75)
Grade	Ethnic	Mean	N	Mean	N	Mean	N	Mean	N	Mean
I	Total	59.0	183	62.3	191	62.2	225	62.7	238	+3.7
	1	55.4	42	60.6	48	56.7	56	60.0	68	+4.6
	2	48.8	19	53.8	20	55.9	26	53.6	12	+4.8
	3	61.8	122	64.4	123	65.0	173	64.6	158	+2.8
II	Total	61.5	231	63.0	235	64.6	216	64.7	254	+3.2
	1	59.1	63	61.0	71	63.5	64	60.9	49	+1.8
	2	54.6	22	57.1	22	56.2	18	57.1	26	+2.5
	3	63.6	146	64.9	142	66.2	134	66.9	179	+3.3
III	Total	64.4	197	64.8	214	64.2	247	65.4	224	+1.0
	1	62.6	42	64.8	53	63.4	65	65.8	64	+3.2
	2	58.9	21	57.7	19	55.2	23	57.1	19	-1.8
	3	65.8	134	65.7	142	65.9	159	66.4	141	+ .6

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

Table 14

Pupil Self Concept Test Data by Grade and Ethnic Group
Matched Pre- and Posttest Mean Gain Scores
Piers-Harris Self Concept Test

Group		1975			1976			1977			1978			Differences ('78-'75)	
Grade	Ethnic	Mean	%	N	Mean	%	N	Mean	%	N	Mean	%	N	Mean	%
IV	Total	54.8	55	221	56.4	57	213	54.0	52	225	54.5	55	251	- .30	0
	1	52.8	49	35	52.2	46	48	48.8	38	62	49.3	38	57	-3.50	-11
	2	56.5	60	22	60.5	71	20	62.7	77	19	60.4	69	24	+3.90	+ 9
	3	55.0	55	164	57.2	60	145	55.2	55	144	55.4	55	170	+ .40	0
V	Total	53.6	52	179	57.0	60	218	55.0	55	226	55.7	57	235	+2.10	+ 5
	1	48.9	38	57	49.8	41	63	48.0	36	46	50.8	44	67	+1.90	+ 6
	2	59.8	69	21	61.4	71	18	63.7	79	20	64.2	79	19	+4.40	+10
	3	54.9	55	101	59.6	69	137	56.0	57	160	56.8	60	149	+1.90	+ 5
VI	Total	53.5	52	233	58.0	63	242	56.5	60	227	59.6	69	228	+6.10	+17
	1	51.6	46	55	51.6	46	57	48.3	36	68	54.4	52	44	+2.80	+ 6
	2	60.0	69	27	65.0	82	27	68.0	89	20	68.1	89	22	+8.10	+20
	3	53.1	49	151	59.1	66	158	58.8	66	139	59.9	69	162	+6.80	+20

ETHNIC GROUPS
1. Indian
2. Hutterite
3. Other

Otis-Lennon Mental Ability Test

A comparison of the final 1978 Otis-Lennon test data with the earlier 1975 data indicated that, out of the twenty-four possible comparisons, nineteen showed positive and five negative differences. The 1978 Grade I, as a total group, showed the greatest difference when compared with the 1975 Grade I pupils, with a +19 overall mean DIQ increase.

The 1978 Grade VI pupils, when compared with the 1976 Grade VI pupils, showed the least difference (+2 mean DIQ).

Comparing the ethnic groups and their overall differences from the beginning of the project to the end indicated that the 1978 Indian pupils in Grade III showed the greatest difference (+22) in mean DIQ scores when compared with the 1975 Grade III Indian pupils. The 1978 Grade I Indian pupils made the second highest increase (+18). Grade IV and VI 1978 Hutterites showed the greatest decrease (-6) when compared with their 1975 counterparts.

Gates- Mac Ginitie Reading Tests

The analysis of the three Gates-MacGinitie reading subtests, comparing 1978 subtest scores with 1976 subtest scores for Grades I, II, III and VI, and the 1975 scores for Grades IV and V, indicated the following differences. Of all twenty-four possible grade scores on the Vocabulary

subtest, eight showed a positive difference in favor of the 1978 data, eleven a negative difference in favor of the pretest scores and five no difference between the early and final (1978) scores. Each of the Grades II, IV and VI showed a grade score increase of two months from the earlier pretests to the 1978 posttests. Grade III (1978) pupils showed a decrease of three months on the overall grade score.

The ethnic breakdown on the Vocabulary subtest indicated that Grade II Indian pupils and Grade VI Hutterite pupils compared more favorably in 1978 than did all other ethnic groups, with a posttest grade score gain of three months. The 1978 Grade IV Hutterite pupils showed a greater decrease than did the other groups, a grade score difference of -4 months.

The Gates-MacGinitie Speed and Accuracy subtest data showed no differences between the overall grade scores for any of the grades when the 1978 data were compared with those of the 1975 and 1976 testings.

When the data relative to ethnic groups were compared, it was found that the 1978 Grade V Hutterites made the larger positive difference, +4 months greater than the 1975 group. The 1978 Grade VI Hutterites showed the largest negative difference, -1.4 years.

The Comprehension subtest scores showed Grade IV 1978 pupils with the highest grade score increase at +3 months. The 1978 Grade V pupils, as a total group,

decreased one month when compared with the 1975 pupils in this same grade.

Other pupils in the 1978 Grade II group showed a greater positive grade score difference than did any of the other ethnic subgroups (+6 months).

An overall analysis of the difference between the 1978 and 1975-76 grade scores on this Comprehension subtest showed eleven positive differences in favor of the 1978 groups, ten negative differences, and three scores with no differences.

Stanford Achievement Tests

A comparison of the 1978 with the 1976 Grade I data showed that the only difference by total grade occurred in the Word Reading subtest. This was a one-month increase in favor of the 1978 pupils. All other subtests showed no differences between the 1978 and 1976 data.

Few differences occurred among the Grade I ethnic pupils on the Stanford Tests. The few differences that did occur were plus or minus one month.

Of all twenty-four possible grade scores, twelve showed no differences, five differences favoring the 1978 pupils, and three favoring the pretest groups.

The data on the Grade II Stanford Achievement Tests showed an overall upward trend when the 1978 test scores of pupils in that grade were compared with the test scores of 1976 pupils in the same grade. Thirteen of the

twenty-four scores were positive in favor of the 1978 group; only one was negative in favor of the 1976 group. Six of the grade scores differences showed no differences.

On the Language subtest of the Stanford Achievement Tests, the grade score of the total group of 1978 Grade VI pupils was greater by six months than that of the 1976 Grade VI pupils. This was the greatest difference between grades on any of the subtests.

On the Spelling subtest of the Stanford Achievement Tests, the 1978 Hutterite pupils scored better by five months than had the 1976 Hutterite pupils. The 1978 Grade II Other subgroup did the poorest of all ethnic subgroups, their grade score differences decreasing by three months.

Canadian Test of Basic Skills

The first subtest of the Canadian Test of Basic Skills, i.e., Vocabulary, showed an overall downward trend from 1975/1976 to 1978 with five increases, seven decreases, and four grade scores that remained the same.

Comparison of the total pupil groups by grade using the Vocabulary subtest data showed that the greatest positive difference was for the 1978 Grade VI pupils with a one-month increase. Nineteen seventy-eight Grade III pupils decreased the most on this subtest (-2 months).

From an ethnic point of view, the 1978 Hutterites made the most positive difference with Grade III, IV,

and VI pupils increasing by three, four, and five months. respectively.

The Reading Comprehension subtest data showed overall increases from the pretest grade scores to the 1978 posttest grade scores (eight positive, four negative, and four with no differences). The 1978 Grade VI pupils showed the highest increase (+2 months). The 1978 Grade III pupils showed a loss (-2 months).

There were few differences between the grade scores of the 1978 and 1975/76 ethnic subgroups. All differences were within one or two months.

No overall positive differences were apparent at any grade level on the Spelling subtest. In fact, all of the 1978 scores for this subtest showed a decline from those of the earlier tests except two which remained the same.

Looking at total grades, the 1978 Grade VI pupils scored the same as had their 1976 counterparts whereas the Grades III, IV and VI 1978 pupils all showed decreases in grade scores by 6, 4 and 5 months respectively.

Among the ethnic subgroups, only the 1978 Grade III Hutterites and the 1978 Grade VI Other pupils showed zero differences from pre- to posttests. All other 1978 ethnic subgroups showed decreases. The 1978 Grade V Hutterites showed the largest decrease (-1.1 years).

The 1978 Capitalization subtest grade scores were downward in trend when compared with the earlier pretest grade scores.

Five of sixteen possible grade scores were positive, seven negative, and four zero.

When total grades were compared, the 1978 Grade VI pupils showed the largest increase (+4 months). Grades IV and V each showed the greatest decrease (-2 months).

Of the ethnic subgroups, the Hutterite pupils showed an increase of six months in grade score on the Capitalization subtest when compared with their 1976 counterparts. Other pupils in Grade IV showed a decrease of 4 months.

On the Punctuation subtest, the 1978 data showed a downward trend when compared with the pretest data. Of the sixteen possible grade scores, four showed positive differences, seven negative, and five no differences.

Total grade comparisons indicated that, on the Punctuation subtest, the 1978 Grade VI total group showed the largest positive difference (+2 months). The 1978 Grade V group showed the largest decrease (-4 months).

The 1978 Grade III Hutterite subgroup showed an increase of 6 months on the Punctuation subtest when compared with the 1975 pupils in the same grade. The Other pupils in Grade IV showed a decrease of 6 months

on the 1978 testing compared with the 1975 testing of corresponding Grade IV pupils.

The final Canadian subtest scores related to Word Usage. Basically, the data indicated that the 1978 pupils showed that almost half of their scores increased while half decreased on this subtest (six positive, seven negative, and three with no differences). The 1978 Grade VI pupils were three months ahead of the Grade VI 1976 pupils. The 1978 Grade III pupils were four months behind the corresponding 1975 pupils.

On the Word Usage subtest, the 1978 Hutterite subgroup in Grade VI was seven months ahead of the corresponding 1975 subgroup. In each of Grades IV and V the 1978 pupils were three months behind the 1975 pupils in the same grades.

Self-Concept Tests

The self-concept of pupils in Grades I, II and III was tested using the Pictorial Self-Concept Test. A comparison of the 1978 with the 1975 pupil scores showed an overall increase in favor of the 1978 pupils. By total grades, the 1978 Grade I pupils made the largest difference, a mean gain score of +3.7.

When the ethnic subgroups in these grades were compared, it was found that, except for the Hutterite subgroup which decreased by -1.8 mean score points, all

showed increases over comparable scores of the corresponding 1975 subgroups.

Grades IV, V and VI pupils were tested on the Piers-Harris Self-Concept Test. Most 1978 pupils showed an increase in mean self-concept scores when compared with the 1975 pupils in these grades.

The total 1978 Grade VI group showed an increase of +17 points over the corresponding 1975 pupils in this grade. The 1978 Grade IV pupils remained the same as the 1975 pupils.

All ethnic sub-groups in Grades IV, V and VI showed increases in self-concept mean scores except for the 1978 Indian pupils who showed a decrease of -11 points. The 1978 and 1975 Grade IV Other pupils showed no score differences.

Summary

In summary, the overall comparison of the 1978 pupil scores with the 1975 and/or 1976 pupil scores showed the following. Otis-Lennon Mental Abilities Test scores showed a general positive increase over the 1975 testing. This occurred across all grades and for all ethnic groups.

On the Gates-MacGinitie Reading Tests, the 1978 Vocabulary subtest scores showed a decrease when compared with the 1975/76 scores. The Speed and Accuracy scores for 1978 showed a greater tendency to remain like the

1975-76 scores. The 1978 Reading Comprehension pupil data showed a fairly even balance between increases and decreases when compared with the 1975-76 pupil data. The comparison of the ethnic subgroups on the 1978 Gates-MacGinitie Reading Test data showed a greater decrease across the 1978 subtests for the Indian and Hutterite pupils with the Other pupils tending to balance out between increases and decreases.

The 1978 pupil achievement data for the Stanford Tests showed that for Grade I there was a tendency to maintain the same relative position compared with that shown in the 1976 data. The Grade II 1978 Stanford Test data showed a large overall increase compared with scores for the same grade on the 1976 test data. These trends held regularly across the ethnic groups.

The data on the Canadian Test of Basic Skills for 1978 showed a general decrease across all subtests when compared with 1975/76 test results. The exception to this was on the 1978 Reading Comprehension subtest which showed a slight increase over the 1975-76 test results.

A comparison by ethnic subgroups on the 1978 Canadian Test of Basic Skills data showed that across all subtests there was a general increase for the Hutterite and a general decrease for the Indian and Other sugroups when compared with 1975/76 pupil scores.

The 1978 pupil self-concept scores for both the Pictorial and Piers-Harris tests showed very definite increases over the 1975 pupil scores on these tests. The increases on the 1978 scores held up across all ethnic subgroups.

From the above information, overall comparisons between 1978 and 1975/76 data on pupil scores showed that 106 of the 1978 scores increased over those of 1975-76. Of the other 137 scores, 79 showed decreases from 1975/76 scores while 58 remained the same.

RETEST DATA BY GRADE AND ETHNIC GROUP

Tables 15 through 17 include a record of the number of pupils who were retested at each grade level on the Gates-MacGinitie, Stanford Achievement, and Canadian Test of Basic Skills. The mean scores for each of these groups of pupils are also given.

Table 15

Gates-MacGinitie Reading Test Data by Grade and Ethnic Groups
Retest Data for 1977-1978

Form	Grade	I						II						III						IV						V						VI					
	Ethnic	Total		1		2		3		Total		1		2		3		Total		1		2		3		Total		1		2		3		Total		1		2		3	
	Subtest	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M
B	Voc.	55	31	2	24			53	34																														
	Comp.	34	23					34	25																														
C	Voc.									49	35	2	32					47	38																				
	Comp.	3	25					3	25	62	35							62	35																				
D	Voc.									5	30							5	30	36	31	2	30			28	31												
	SP-AC																			3	18					3	18												
	Comp.									16	36							16	26	35	31					25	31												
E	Voc.																											1	28	13	27					12	27	31	30					31	28
	SP-AC																			1	20					1	20	23	16			4	16	4	8	48	17	93	18	7	15	4	9	82	18
	Comp.																			2	37					2	37	12	37			1	33			27	39	61	41	5	30			58	42

N = Number of pupils retested.

M = Mean test scores.

Table 16

Stanford Achievement Test Data by Ethnic Group
Grade 1 Pupil Retest Means
Primary II
1977-1978

	Total		1*		2*		3*	
Subtests	N	Mean	N	Mean	N	Mean	N	Mean
Word Meaning	5	36					5	36
Paragraph Meaning	29	13			1	10	28	13
Word Study Skills	17	32					17	32

N = Number of pupils retested; M = Mean test score.

1 = Indian
2 = Hutterite
3 = Other

Table 17

Canadian Test of Basic Skills by Grade and Ethnic Group
Retest Data 1977-1978

Grade	Ethnic		Grade 4 Tests						Grade 5 Tests						Grade 6 Tests						Grade 7 Tests						Grade 8 Tests					
			Vocabulary	Reading	L-1 Spelling	L-2 Cap.	L-3 Punc.	L-4 Usage	Vocabulary	Reading	L-1 Spelling	L-2 Cap.	L-3 Punc.	L-4 Usage	Vocabulary	Reading	L-1 Spelling	L-2 Cap.	L-3 Punc.	L-4 Usage	Vocabulary	Reading	L-1 Spelling	L-2 Cap.	L-3 Punc.	L-4 Usage	Vocabulary	Reading	L-1 Spelling	L-2 Cap.	L-3 Punc.	L-4 Usage
III	Total	N	33	35	3	2	23				5		1	6						1												
		M	28	29	32	33	26				32		34	26						25												
	1	N	3	3			1																									
		M	24	29			23																									
	2	N																														
		M																														
	3	N	30	32	4	2	22				5		1	6						1												
		M	28	29	32	33	26				32		34	26						25												
IV	Total	N							19	2	10	5	3	12	2		2	4	1	4		1			1							
		M							35	63	34	35	34	27	37		37	32	25	26		39			26							
	1	N																		1												
		M																		26												
	2	N												2																		
		M												28																		
	3	N							19	2	10	5	3	10	2		2	4	1	3		1			1							
		M							35	63	34	34	34	27	37		37	32	25	26		39			26							
V	Total	N													4		3	10	4	15		2	1	1	3	1		1	1	2		
		M													38		43	34	36	26		43	40	42	30	25		38	43	25		
	1	N													1																	
		M													34																	
	2	N																		2												
		M																		26												
	3	N													3		3	10	4	13		2	1	1	3	1		1	1	2		
		M													39		43	34	36	26		43	40	42	30	25		38	43	25		
VI	Total	N																			13	2	8	4	4	16	2		2	3	8	
		M																			39	62	39	38	38	27	45		38	40	24	
	1	N																														
		M																														
	2	N																														
		M																														
	3	N																			13	2	8	4	4	16	2		2	3	8	
		M																			39	62	39	38	38	27	45		38	40	24	

N = Number of pupils retested.

M = Mean test score.

PART IV

PUPIL RETENTION AND LEARNING RATE

There were two basic procedures used in the 1976-77 evaluation to measure the learning rate of selected pupils in the Cardston School Division.

The first procedure addressed the question of pupil retention of material included in individual mastery tests. A selected number of pupils was retested on four mastery tests. The tests used were those the students had passed two, four, eight and sixteen weeks prior to the date of retesting. Officials of the Cardston School Division administered the tests in the late spring of 1976-77. The sampling included Indian and Other pupils, but did not include Hutterite pupils. The tests provided a timed measure of reading and spelling accuracy.

The second procedure, dealing with learning rate, was an extension of the mastery test data analysis used in the August 1976 (1975-76) report. The 1976-77 mastery data provided a more extensive analysis of the average number of books completed and the number of words mastered over a 180 day school year.

I. PUPIL RETENTION OF MASTERY TESTING

The ECRI instructional procedures require that each pupil receive a mastery test after he or she has completed a unit of reading instruction based on either the Sullivan Reading Program or the Ginn 360 Reading Program. The criteria for mastery require that the pupil spell, write, or read a given word list within a specified level of accuracy. (Data relative to the analysis of mastery learning are presented below.)

The ECRI staff has developed mastery tests for each reading unit and level within each book of the Ginn 360 and Sullivan readers. Samples of these tests were included as Appendix B of the August 1976 (1975-76) initial report. The administrative staff of the Cardston School Division arranged for the keeping of a progress report on each pupil showing the date and performance level.

A question was raised at the April 20, 1977, meeting in Edmonton concerning the ability of a pupil to retain a similar level of performance on material shown as mastered in previous mastery testing. To answer the retention question the external evaluation team requested that the Cardston School Division coordinator for the ECRI project conduct a retesting program on a random selection of pupils.

The external evaluation team asked that on a given day each pupil in the sample be required to retake four

mastery tests. These were the mastery tests each pupil had completed two, four, eight and sixteen weeks prior to the date of retesting. The request also asked that the retesting be representative of the two reading programs.

The 1977 data forwarded to the external evaluation team showed that the sample had been taken from three schools: the Lee Creek Educational Centre, Glenhill and Magrath. Both Indian and Other pupils in Grades II and IV were included in the sample. There were ten (10) ECRI teachers represented.

Essentially, retention data presented in the 1976-77 report suggested that the ECRI reading procedures do maintain a high level of reading and spelling accuracy with the average pupil, thus suggesting that these samples are representative, at least through a sixteen-week period. One of the weaknesses of the 1977 retention report was that it did not identify the three ethnic subgroups. In the evaluation meeting held in Edmonton on December 19, 1977, it was suggested that the external evaluation team request the Cardston School Division to readminister the retention procedure to an equal number of Indian, Hutterite and Other pupils.

The Cardston School Division elected to test 10 pupils in each of the ethnic subgroups from the Grade II level. The mastery tests used in this evaluation were

taken from the Sullivan Reading Program only and not from the Ginn 360 Reading Program.

Table 19 shows that spelling accuracy fell off toward the sixteenth week. This is more pronounced for the Indian sample than for the Hutterite and Other samples.

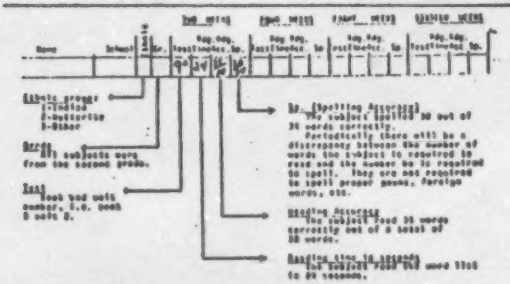
Reading accuracy on the other hand held up extremely well over the sixteen-week period for all three groups. Table 19 suggests that retention of new words learned and tested on the ECRI-developed mastery tests does hold up over a sixteen-week period with spelling accuracy having a lesser degree of accuracy.

It should be noted that the difficulty of the thirty selected pupils to maintain a high level of spelling accuracy of new words taught was also reflected in the comments of parents and teachers in the questionnaire administered and analyzed by the external evaluation team. (See Part VII below).

Table 19

Pupil Retention of New Words Taught from the Sullivan Programs and Mastered at a Specific Level of Reading and Spelling Accuracy When Retested from Those Mastery Tests that Were Administered Two, Four, Eight, and Sixteen Weeks Prior to the Date of Retesting

		TWO WEEKS				FOUR WEEKS				EIGHT WEEKS				SIXTEEN WEEKS			
Ethnic Groups	Gr.	Test	Rdg. Time	Rdg. Acc.	Sp.	Test	Rdg. Time	Rdg. Acc.	Sp.	Test	Rdg. Time	Rdg. Acc.	Sp.	Test	Rdg. Time	Rdg. Acc.	Sp.
1	2	13^{1}	15	26/26	18/26	12^{4}	15	19/19	15/19	12^{2}	20	34/35	24/35	5^{4}	15	20/20	15/20
1	2	14^{4}	18	27/28	26/28	14^{3}	37	40/41	34/41	14^{2}	39	47/47	37/47	10^{3}	30	33/35	32/35
1	2	8^{4}	35	25/28	21/28	8^{1}	36	24/27	19/27	6^{4}	20	25/28	16/28	5^{3}	45	24/29	11/29
1	2	5^{4}	40	15/20	19/20	5^{3}	45	29/29	21/29	5^{2}	30	19/21	15/21	4^{2}	20	21/21	16/21
1	2	4^{1}	34	20/22	14/22	3^{4}	17	12/14	8/14	3^{3}	39	15/15	10/15	2^{4}	40	10/13	8/13
1	2	9^{2}	29	30/31	30/31	9^{1}	24	27/29	14/29	8^{3}	25	32/32	29/32	6^{4}	17	27/28	16/28
1	2	4^{2}	17	19/21	14/21	4^{1}	14	21/22	14/22	3^{3}	14	13/15	13/15	2^{3}	22	13/14	8/14
1	2	15^{3}	45	66/66	52/66	15^{2}	56	89/90	72/88	11^{4}	15	29/29	26/29	9^{3}	38	60/61	57/60
1	2	18^{4}	43	44/44	34/44	18^{3}	45	52/52	34/48	10^{1}	110	73/76	45/66	11^{3}	53	51/54	43/54
1	2	14^{3}	36	39/41	35/41	14^{1}	27	44/45	38/45	13^{3}	33	30/31	24/31	10^{4}	60	50/53	40/53
2	2	9^{3}	53	61/61	58/61	9^{2}	20	29/31	30/31	8^{4}	27	27/28	24/28	7^{2}	33	19/21	19/21
2	2	6^{2}	22	23/23	22/23	6^{1}	12	18/18	15/15	5^{1}	10	10/12	9/12	3^{4}	16	13/14	12/13
2	2	12^{3}	24	36/36	33/33	12^{1}	31	41/41	38/40	10^{2}	31	35/35	33/33	8^{2}	11	21/21	20/21
2	2	11^{3}	44	54/54	53/53	11^{2}	16	34/34	27/28	10^{2}	34	35/35	33/33	8^{3}	30	30/32	32/32
2	2	10^{1}	37	52/53	43/46	9^{3}	35	61/61	56/59	8^{1}	23	26/27	27/27	6^{3}	17	26/26	24/26
2	2	12^{3}	21	35/35	32/35	11^{4}	13	28/29	22/23	11^{2}	17	34/34	26/28	10^{1}	31	52/53	40/46
2	2	8^{2}	11	21/21	20/21	7^{4}	15	27/27	27/27	7^{2}	17	21/21	20/21	6^{4}	16	27/28	28/28
2	2	8^{1}	21	23/27	26/27	7^{4}	23	25/27	26/27	7^{3}	17	20/21	21/21	6^{4}	22	27/28	27/28
2	2	15^{3}	39	59/66	49/66	15^{1}	33	52/54	40/54	14^{3}	29	34/41	32/41	12^{4}	9	18/19	15/19
2	2	15^{2}	67	80/90	63/90	15^{1}	28	40/54	35/54	13^{1}	18	25/26	19/26	11^{4}	17	26/29	25/29
3	2	12^{4}	8	18/19	16/19	12^{3}	15	34/36	30/36	12^{1}	25	38/41	28/41	9^{2}	15	31/31	25/31
3	2	15^{2}	46	89/90	76/90	15^{1}	33	52/54	48/54	14^{4}	12	28/28	22/28	14^{3}	19	40/40	35/40
3	2	10^{4}	24	51/53	47/53	10^{3}	28	51/51	47/51	9^{2}	18	31/31	30/31	8^{3}	18	32/32	29/32
3	2	15^{3}	80	63/66	30/66	15^{1}	70	53/56	21/56	14^{3}	37	41/41	15/41	11^{2}	40	33/34	20/34
3	2	20^{1}	50	63/66	53/61	19^{2}	48	60/65	57/65	17^{1}	10	19/21	21/21	15^{2}	55	90/90	86/90
3	2	17^{1}	10	21/21	21/21	15^{2}	64	87/90	90/90	13^{4}	20	45/45	45/45	11^{3}	35	54/54	53/54
3	2	18^{4}	25	44/44	27/44	18^{3}	40	52/52	28/48	18^{2}	50	53/53	28/53	13^{2}	40	49/49	36/49
3	2	21^{1}	43	67/67	62/65	19^{4}	32	43/43	37/43	19^{3}	23	42/42	37/41	17^{4}	29	44/44	35/43
3	2	17^{1}	10	21/21	20/20	15^{4}	30	57/58	44/57	13^{2}	62	89/90	69/90	13^{3}	20	31/31	24/31
3	2	19^{1}	40	65/66	39/64	18^{4}	30	43/44	30/44	18^{1}	60	76/76	52/66	11^{3}	40	53/54	44/54


Ethnic groups
1-Indian
2-Hutterite
3-Other
Grade
All subjects were from the second grade.
Test
Each test unit number, i.e. each 5 unit 5.
Reading Accuracy
The subject read 25 words correctly out of a total of 30 words.
Reading time in seconds
The subject read 30 words in 60 seconds.

The following are the dates when the subjects originally passed each of the tests:

Two weeks: May 15-19, 1978
Four weeks: May 1-5, 1978
Eight weeks: April 3-7, 1978
Sixteen weeks: February 6-10, 1978

ETHNIC
1. Indian
2. Hutterite
3. Other

PART V

WRITTEN COMPOSITION COMPONENT

Introduction

In an effort to study the applied creative writing skills of elementary school pupils in the Cardston School Division over time (1975 through 1978), written composition assignments were administered in the 1975-76 school year to the majority of the pupils in Grade IV (185), Grade V (185), Grade VI (196) and Grade VII (196) and in the 1977-78 school year to the majority of the pupils in attendance in Grade IV (220), Grade V (236), Grade VI (215), and Grade VII (107). The majority referred to consists of those pupils in attendance on the days on which the assignments were completed. The purpose of administering the written assignments was to study the ability of pupils to express ideas effectively, creatively and acceptably and to determine, to the extent possible, any differences between the initial (1975-76) and final (1977-78) testings. It was not considered possible to relate the findings of the study of the written assignments to the ECRI program for reading and language improvement, except incidentally. Rather, it was hoped that the written assignments, besides permitting the

short-term comparisons reported below, might provide teachers with a source of information to guide their immediate teaching strategies relative to written expression as well as to provide a bank of samples of writing with which the work of pupils five, ten or fifteen years hence might be compared.

Assumptions

It was assumed that the two assignments, though on different topics, are comparable and adapted to the maturity of the pupils to whom they were directed, one to Grade IV and V pupils, the other to Grade VI and VII pupils. There is no statistical evidence of such comparability. It was also assumed that, because of the relatively large number (and proportion) of pupils who completed the written assignments in each grade, that the absence of pupils from school on the days on which the assignments were completed did not contaminate the results. This assumption, too, has not been validated statistically.

Procedure

The written assignments were completed by pupils in Grades IV, V, VI and VII in 1975-76 and again during the first week of April 1978. The Grade IV and V pupils wrote on one topic, the Grade VI and VII on another, similar, but more challenging.

Each composition from both the 1975-76 and 1977-78 writings was evaluated for quality and for acceptable form and use of the mechanics of expression (spelling, punctuation, and grammar and usage). Using quality scales developed by Baker and Coutts in 1953,[1] a panel of three competent and experienced teacher evaluators graded all for quality of expression on a 5 (highest), 4, 3, 2, 1 (lowest) distribution. Each teacher evaluator graded each composition independently of the others. The scores thus assigned by the three teacher evaluators were consistently close. The final quality score assigned to each composition was the average of the scores assigned by the three evaluators rounded to the nearest whole number.

Only after all compositions in each year of administration of the written assignments had been scored for quality were they graded for acceptable use of the mechanics of expression. Using a guide prepared by Baker and Coutts in 1953,[2] the teacher evaluators reread the compositions, noting and recording errors in spelling, punctuation, and grammar and usage. An arbitrary conversion scale--5 (no errors), 4 (one, two or three errors), 3 (four, five, or six errors), 2 (seven, eight or nine errors), 1 (ten or more errors)--was applied in tabulating the results of the scoring of the mechanics of expression.

The scores for quality and mechanics of expression, together with other relevant data (name, identification number, sex, grade, school attended, ethnic subgroup, etc.) were stored on punched cards to permit the analyses and comparisons reported below as well as making possible additional analyses if thought useful.

The arithmetic means of the 1975-76 and 1977-78 Grade IV, V, VI and VII composition scores were calculated for total grades, for ethnic subgroups within grades, and for male and female pupils. In addition, the means of 1975-76 and 1977-78 matched pairs in Grade IV (1975-76) and Grade VI (1977-78) and in Grade V (1975-76) and Grade VII (1977-78) were calculated. These formed the basis for the comparisons reported below.

Quality of Written Expression

Part (1) of each of Tables 19, 20, 21, and 22 presents by total group (grade) and by ethnic subgroup within each grade, comparisons of means and the levels of statistical significance of differences between means using the t-test procedure.

Part (1) of Table 19, which presents comparisons for 1975-76 and 1977-78 Grade IV pupils, shows slight increases in means with four showing statistical significance at varying levels: for total group, Hutterite subgroup, Other subgroup, and female pupils).

Part (1) of Table 20, which presents comparisons of 1975-76 and 1977-78 Grade V pupils, shows slight increases for the total group, the Other subgroup, the male pupils, and the female pupils. Slight, but not statistically significant, losses were shown by the Indian and Hutterite subgroups. In fact, the only statistically significant differences reported were for the Other subgroup (at the .005 level) and the Female subgroup (at the .05 level).

Part (1) of Table 21, which presents comparisons of 1975-76 and 1977-78 Grade VI pupils, shows slight increases for the total group, the Hutterite subgroup, and the Female subgroup, and slight decreases for the Indian and the Male subgroups. The only difference showing statistical significance (at the .02 level) was the decrease for the Indian subgroup.

Part (1) of Table 22, which presents comparisons of 1975-76 and 1977-78 Grade VII pupils, shows slight increases for the total group, and all subgroups except the Female subgroup. The only difference showing statistical significance was the increase for the Male subgroup.

Part (1) of Table 23, which presents comparisons of matched pairs of 1975-76 Grade IV and 1977-78 Grade VI pupils, shows, for some unexplained reason, decreases in means of total group, Indian, Other, and Male subgroups, no difference in means of the Female subgroup, and a

slight gain for the Hutterite subgroup. None of the differences were statistically significant.

Part (1) of Table 24, which presents comparisons of 1975-76 Grade V and 1977-78 Grade VII pupils, shows decreases, again for some unexplained reason, for the total group and for all subgroups. Three negative differences were statistically significant: the total group (at the .01 level), the Indian subgroup (at the .0001 level), and the Male subgroup (at the .05 level). It should be noted that there were no Hutterite pupils in Grade VII; hence, there are no matched pair comparisons for the Hutterite subgroup.

It is encouraging that grade by grade the means of quality of expression are slightly upward. Variations in this increase from grade to grade may explain in part the results obtained for matched pairs across grades though we have no firm evidence to support this. Another explanation may be that the two assignments in fact are different.

In 1953, when the same writing assignments were used, one with representative samples of Grade IV and the other with representative samples of Grade VII pupils from Alberta cities, towns, graded rural schools, and ungraded one-room schools the following results were obtained, using the same procedures for administration and scoring as were used in the present study:

a. For Grade IV pupils

City sample	$\bar{x} = 3.17$
Town sample	$\bar{x} = 3.15$
Graded rural sample	$\bar{x} = 2.89$
Ungraded rural sample	$\bar{x} = 2.82$
Total sample	$\bar{x} = 3.03$

b. For Grade VII pupils

City sample	$\bar{x} = 2.96$
Town sample	$\bar{x} = 2.95$
Graded rural sample	$\bar{x} = 2.85$
Ungraded rural sample	$\bar{x} = 2.75$
Total sample	$\bar{x} = 2.89$

These data are given here for the interest of those who might wish to make further comparisons. They should be used with great care considering the differences in the design of the two studies.

Mechanics of Expression

Part (2) of each of Tables 19, 20, 21, and 22 presents by total group (grade) and by ethnic subgroup within each grade, comparisons of means and the levels of statistical significance of differences between means using the t-test procedure.

Part (2) of Table 19, which presents comparisons for 1975-76 and 1977-78 Grade IV pupils, shows slight increases in means for the Indian and Hutterite subgroups. All other differences are negative and none are

statistically significant. It would seem that there has been a slight overall decline in the applied use of the mechanics of expression in this grade.

Part (2) of Table 20, which presents comparisons for 1975-76 and 1977-78 Grade V pupils, shows decreases in all except the Male subgroup, and even that difference was quite small. The only statistically significant difference was the downward one for the Female subgroup (at the .04 level).

Part (2) of Table 2I, which presents comparisons for 1975-76 and 1977-78 Grade VI pupils, shows increases for the total group, the Other, the Male and the Female subgroups, and decreases for the Indian and Hutterite subgroups. All differences are small and none statistically significant.

Part (2) of Table 22, which presents comparisons for 1975-76 and 1977-78 Grade VII pupils, shows slight increases for all but the Female subgroup. The increases for the total group (at the .04 level), Other subgroup (at the .07 level), and the Male subgroup (at the .0001 level) were statistically significant.

Part (2) of Table 23, which presents comparison of matched pairs of 1975-76 Grade IV and 1977-78 Grade VI pupils, shows decreases for all but the Hutterite subgroup. All differences were small with none showing statistical significance.

Part (2) of Table 24, which presents comparisons of matched pairs of 1975-76 Grade V and 1977-78 Grade VII pupils, shows all differences to be in a negative direction with those for the Total group, the Other subgroup, and the Male subgroup being statistically significant at the .007, .02, and .04 levels respectively.

In general, the use of the mechanics of expression as applied in the composition assignments seems to have declined. The reader might like to compare this finding with that on the Spelling subtest of the Canadian Test of Basic Skills. An inspection of the detailed data relative to the mechanics of expression shows, in general, a greater number and proportion of errors in spelling than in punctuation or grammar and usage.

Tables 25, 26, 27 and 28 are presented to show a breakdown, by total group and by ethnic subgroup, of the percentages of pupils scoring 5, 4, 3, 2, and 1 respectively on the mechanics of expression in Grades IV, V, VI, and VII using the data available from the written composition assignments.

Concluding Statement

Because of the nature of the pupil population in the Cardston School Division, it would seem unwise, if not impossible, from the present study of written compositions to draw many meaningful conclusions from the data tabulated. The External Evaluation Team believes,

however, that much remains to be done to assist pupils to express themselves more effectively in writing and that this might be done by giving them more guidance in marshalling ideas, in organizing them coherently, and in presenting them with greater attention to clarity, variety, style, and accuracy with respect to the mechanics of language. The Team believes, further, that pupils should be given frequent opportunities to express themselves through writing and speaking, that what they express should be read or listened to, and that, on the basis of this, positive suggestions for improvement should be made.

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1. Baker, H. S., and Coutts, H. T. "A Composition Scale for Alberta Grade Four and Grade Seven Students." Alberta Journal of Educational Research, Vol. 1, No. 2, June, 1955, pp. 53-61.
2. Baker, H. S., and Coutts, H. T. "A Study of the Written Composition of a Representative Sample of Alberta Grade Four and Grade Seven Pupils." Alberta Journal of Educational Research, Vol. 1, No. 2, pp. 7 and 8.
3. Ibid., p. 15.

Table 19

Comparison of 1976 and 1978 Grade IV Composition Scores
Cardston School Division No. 2

(1) Quality of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	185	2.48	220	2.84	+3.82	.002
	1	28	2.04	52	2.17	+0.73	NS
	2	18	1.94	21	2.43	+1.95	.06
	3	139	2.63	147	3.13	+4.61	.0001
M		103	2.30	118	2.49	+1.53	NS
F		82	2.70	102	3.24	+4.15	.0001

(2) Mechanics of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	185	2.12	220	1.97	-1.36	NS
	1	28	1.75	52	1.88	+0.55	NS
	2	18	1.50	21	1.67	+0.55	NS
	3	139	2.28	147	2.05	-1.74	NS
M		103	1.98	118	1.77	-1.44	NS
F		82	2.30	102	2.21	-0.59	NS

Total = Total group
1 = Indian subgroup
2 = Hutterite subgroup
3 = Other subgroup

M = Male
F = Female

5 (Highest)
4
3
2
1 (Lowest)

Table 20

Comparison of 1976 and 1978 Grade V Composition Scores
Cardston School Division No. 2

(1) Quality of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	189	2.69	236	2.84	+1.72	NS
	1	40	2.08	47	2.00	-0.44	NS
	2	17	2.71	23	2.30	-1.64	NS
	3	132	2.87	166	3.16	+2.85	.005
M		92	2.55	130	2.67	+0.90	NS
F		97	2.81	106	3.06	+1.94	.05

(2) Mechanics of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	189	2.32	236	2.14	-1.49	NS
	1	40	1.72	47	1.45	-1.45	NS
	2	17	1.88	23	1.83	-0.17	NS
	3	132	2.55	166	2.39	-1.18	NS
M		92	2.16	130	2.18	+0.09	NS
F		97	2.46	106	2.10	-2.11	.04

Total = Total group
1 = Indian subgroup
2 = Hutterite subgroup
3 = Other subgroup

M = Male
F = Female

5 (Highest)
4
3
2
1

Table 21

Comparison of 1976 and 1978 Grade VI Composition Scores
Cardston School Division No. 2

(1) Quality of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	196	2.28	215	2.29	+0.07	NS
	1	50	1.92	38	1.53	-2.54	.02
	2	23	1.82	22	2.00	+0.73	NS
	3	123	2.52	155	2.53	+0.02	NS
M		94	2.15	120	2.08	-0.58	NS
F		102	2.41	95	2.57	+1.05	NS

(2) Mechanics of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	196	1.77	215	1.90	+1.20	NS
	1	50	1.32	38	1.29	-0.21	NS
	2	23	1.91	22	1.73	-0.60	NS
	3	123	1.93	155	2.07	+1.04	NS
M		94	1.61	120	1.66	+0.39	NS
F		102	1.92	95	2.20	+1.70	NS

Total = Total group
1 = Indian subgroup
2 = Hutterite subgroup
3 = Other subgroup

M = Male
F = Female

5 (Highest)
4
3
2
1

Table 22

Comparison of 1976 and 1978 Grade VII Composition Scores
Cardston School Division No. 2

(1) Quality of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	147	2.22	107	2.47	+1.71	NS
	1	45	1.46	32	1.62	+0.87	NS
	2						
	3	102	2.56	75	2.83	+1.66	NS
M		80	1.96	53	2.42	+2.51	.01
F		67	2.54	54	2.52	-0.09	NS

(2) Mechanics of Expression

	Year	1976		1978		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	147	1.82	107	2.12	+2.10	.04
	1	45	1.44	32	1.66	+1.06	NS
	2						
	3	102	1.98	75	2.32	+1.85	.07
F		80	1.46	53	2.09	+3.38	.001
F		67	2.24	54	2.15	-0.41	NS

Total = Total group
1 = Indian subgroup
2 = Hutterite subgroup
3 = Other subgroup

M = Male
F = Female

5 (Highest)
4
3
2
1

Table 23

Comparison of Matched Pairs of 1976 Grade IV and 1978 Grade VI Composition Scores Cardston School Division No. 2

(1) Quality of Expression

Year & Grade		1976 Grade IV		1978 Grade VI		Significance Tests	
Sex	Groups	N	Mean	N	Mean	t	Sig. Level
	Total	150	2.47	150	2.42	-0.83	NS
	1	18	2.05	18	1.94	-0.70	NS
	2	15	1.93	15	2.00	+0.32	NS
	3	117	2.60	117	2.55	-0.81	NS
M		86	2.30	86	2.21	-1.13	NS
F		64	2.70	64	2.70	0.00	NS

(2) Mechanics of Expression

Year & Grade		1976 Grade IV		1978 Grade VI		Significance Tests	
Sex	Group	N	Mean	N	Mean	t	Sig. Level
	Total	150	2.14	150	2.01	-1.29	NS
	1	18	1.72	18	1.50	-0.85	NS
	2	15	1.60	15	1.80	+0.82	NS
	3	117	2.27	117	2.12	-1.33	NS
M		86	1.99	86	1.79	-1.46	NS
F		64	2.34	64	2.31	-0.22	NS

Total = Total group
1 = Indian subgroup
2 = Hutterite subgroup
3 = Other subgroup

M = Male
F = Female

Table 24

Comparison of Matched Pairs of 1976 Grade V and 1978 Grade VII Composition Scores Cardston School Division No. 2

Year & Grade		1976 Grade V		1978 Grade VII		Significance Tests	
Sex	Group	N	Mean	N	Mean	t	Sig. Level
	Total	109	2.73	109	2.49	-2.51	.01
	1	20	2.20	20	1.40	-5.14	.0001
	2						
	3	89	2.85	89	2.73	-1.11	NS
M		56	2.64	56	2.33	-2.04	.05
F		53	2.83	53	2.66	-1.46	NS

(2) Mechanics of Expression

Year & Grade		1976 Grade V		1978 Grade VII		Significance Tests	
Sex	Group	N	Mean	N	Mean	t	Sig. Level
	Total	109	2.40	109	2.05	-2.74	.007
	1	20	2.00	20	1.70	-1.37	NS
	2						
	3	89	2.49	89	2.12	-2.44	.02
M		56	2.25	56	1.91	-2.09	.04
F		53	2.57	53	2.19	-1.79	NS

Total = Total group
1 = Indian subgroup
2 = Hutterite subgroup
3 = Other subgroup

M = Male
F = Female

Table 25

Comparison of the Percentage of 1976 and 1978 Cardston School Division Grade IV Pupils Receiving Assigned Scores of 5, 4, 3, 2 and 1 on the Mechanics of Expression of the Written Composition Assignments

Assigned Score	Indian Subgroup		Hutterite Subgroup		Other Subgroup		Total Group	
	1975 %	1978 %	1975 %	1978 %	1975 %	1978 %	1975 %	1978 %
5	0.0	0.0	0.0	0.0	1.4	0.7	1.1	0.5
4	10.7	9.6	11.1	4.8	18.7	12.2	16.7	10.9
3	10.7	21.2	0.0	14.3	25.9	17.0	21.1	17.7
2	21.4	17.3	16.7	23.8	14.4	31.3	15.7	27.3
1	57.2	51.9	72.2	57.1	39.6	38.8	45.4	43.6
N	28	52	18	21	139	147	185	220

5 (Highest), 4, 3, 2, 1 (Lowest)

Table 26

Comparison of the Percentage of 1976 and 1978 Cardston School Division Grade V Pupils Receiving Assigned Scores of 5, 4, 3, 2 and 1 on the Mechanics of Expression of the Written Composition Assignments

Assigned Score	Indian Subgroup		Hutterite Subgroup		Other Subgroup		Total Group	
	1976 %	1978 %	1976 %	1978 %	1976 %	1978 %	1976 %	1978 %
5	0.0	0.0	0.0	0.0	1.5	1.8	1.1	1.3
4	5.0	4.3	11.8	0.0	29.6	19.9	22.7	14.8
3	17.5	10.6	17.7	34.8	23.5	25.3	21.7	23.3
2	22.5	10.6	17.6	13.0	13.6	21.1	15.9	18.2
1	55.0	74.5	52.9	52.2	31.8	31.9	38.6	42.4
N	40	47	17	23	132	166	189	236

5 (Highest), 4, 3, 2, 1 (Lowest)

Table 27

Comparison of the Percentage of 1976 and 1978 Cardston School Division Grade VI Pupils Receiving Assigned Scores of 5, 4, 3, 2 and 1 on the Mechanics of Expression of the Written Composition Assignments

Assigned Score	Indian Subgroup		Hutterite Subgroup		Other Subgroup		Total Group	
	1976 %	1978 %	1976 %	1978 %	1976 %	1978 %	1976 %	1978 %
5	0.0	0.0	0.0	4.5	0.8	1.9	0.5	1.9
4	2.9	2.6	4.2	0.0	8.0	16.1	6.7	12.1
3	2.9	0.0	20.8	13.6	19.7	18.1	16.8	14.4
2	17.1	21.1	25.0	27.3	19.7	14.9	19.9	17.2
1	77.1	76.3	50.0	54.6	51.8	49.0	56.1	54.4
N	35	38	24	22	137	155	196	215

5 (Highest), 4, 3, 2, 1 (Lowest)

Table 28

Comparison of the Percentage of 1976 and 1978 Cardston School Division Grade VII Pupils Receiving Assigned Scores of 5, 4, 3, 2 and 1 on the Mechanics of Expression of the Written Composition Assignments

Assigned Score	Indian Subgroup		Hutterite Sugroup		Other Subgroup		Total Group	
	1976 %	1978 %	1976 %	1978 %	1976 %	1978 %	1976 %	1978 %
5	0.0	0.0	No Hutterite pupils reported in this grade.		2.9	0.8	2.0	0.6
4	2.2	2.6			9.8	16.3	7.5	13.2
3	15.6	15.8			21.6	20.2	19.7	19.2
2	6.7	15.8			13.7	20.2	11.6	19.2
1	75.5	65.8			52.0	42.6	59.2	47.9
N	45	38			102	129	147	167

5 (Highest), 4, 3, 2, 1 (Lowest)

PART VI

EVALUATION AND ANALYSIS OF APPLIED HANDWRITING SKILLS

Procedure

At the December 19, 1978, meeting set up to review the 1976-77 evaluation report on the Cardston School Division Language Arts Improvement Project and to plan for the 1977-78 report, it was agreed that ". . . using samples drawn from the 1975-76 and 1977-78 compositions, an analysis of handwriting could be made and included in this final report." A review was made by the external evaluation team of the Alberta Department of Education Bulletin on Handwriting, of analyses made by Rex Wadham as part of his doctoral dissertation, and of a number of handwriting scales. To make the present study manageable, it was decided to use the Saskatoon Public School Handwriting Scale (1962), the scale recommended in the Alberta Department of Education Bulletin referred to above. This scale provides for each of Grades II, III, IV, V, VI, VII and VIII, five levels of handwriting proficiency to which values of 5 (highest), 4, 3, 2 and 1 (lowest) were assigned. Only the Grade IV and Grade VI scales were used for the reasons stated below. All samples shown in the scales are legible. They differ, however,

in conformity to models with increasing evidence of attention given to uniformity of slant, uniformity of spacing between letters and words, uniformity of letter height, alignment on a horizontal base, acceptability of letter and number formation, line quality including pressure of strokes, size of writing, margins and general appearance, and overall fluency, neatness and flow.

All evaluations made were internal to pupils in the Cardston School Division, since no control groups were available to the evaluation team and since the source of the applied writing samples did not extend beyond that Division. It was decided to limit the analysis to pupils in Grade IV (1975-76), Grade VI (1975-76) and Grade VI (1977-78). This permitted gross comparisons between the total 1975-76 Grade IV population and the total 1977-78 Grade VI population (a vertical comparison), between the total 1975-76 Grade VI population and the total 1977-78 Grade VI population (a horizontal comparison), and between the 1975-76 Grade IV pupils for whom there were handwriting scores in Grade VI in 1977-78 (another vertical comparison.)

Certainly more sophisticated and detailed analyses of handwriting are possible, but limitation of time and resources did not permit even had the result been judged worthwhile. The comparisons made in this study are merely indicators which might well form the basis of future evaluations using the Saskatoon Public School Handwriting

Scale. It would be unwise, and indeed impossible, to attribute to the Language Arts Improvement Project any gains or losses in the mean scores on handwriting recorded below. The main value of the analyses should be to focus teacher attention on the applied handwriting aspect of expression.

The scoring of each pupil's composition for handwriting, using the appropriate scale, was done independently by each of three evaluators in whose judgment the external evaluation team have complete confidence. Through observation the consistency and reliability of their scoring appeared to be strikingly high. The three evaluations for each pupil were averaged and the result rounded to the nearest whole number. The scores were recorded by sub-group (Indian, Hutterite, Other) and by total group.

Tables 29, 30, 31, 32 and 33 which follow record the handwriting scores of pupils on the Saskatoon Public School Handwriting Scale and the means of those scores by sub-group and by total group.

Comparison of Mean Scores

A comparison of mean scores--see summary Tables 34 and 35 below--shows a slight drop in the total grade mean scores from Grade IV (1975-76) to Grade VI (1977-78), no difference from Grade VI (1975-76) to Grade VI (1977-78). When the mean scores of those Grade VI (1977-78) pupils for whom there were also handwriting scores in Grade VI

TABLE 29

CARDSTON SCHOOL DIVISION HANDWRITING SCORES
ON THE SASKATOON PUBLIC SCHOOL HANDWRITING SCALE
GRADE IV 1975-76

Score	Number of pupils			
	Indian sub-group	Hutterite sub-group	Other sub-group	Total group
5	0	0	1	1
4	4	2	21	27
3	12	6	56	74
2	8	4	49	61
1	3	6	13	22
Tot.	27	18	140	185

Total Scores:

(1) Indian (5x0) + (4x4) + (3x12) + (2x8) + (1x3) = 71
(2) Hutterite (5x0) + (4x2) + (3x6) + (2x4) + (1x6) = 40
(3) Other (5x1) + (4x21) + (3x56) + (2x49) + (1x13) = 368
Total = 479

Mean Scores:

(1) Indian 71/27 = 2.6
(2) Hutterite 40/18 = 2.2
(3) Other 368/140 = 2.6
Total 479/185 = 2.6

5 (Highest)
4
3
2
1 (Lowest)

TABLE 30

CARDSTON SCHOOL DIVISION HANDWRITING SCORES
ON THE SASKATOON PUBLIC SCHOOL HANDWRITING SCALE
GRADE VI 1975-76

Score	Number of pupils			
	Indian sub-group	Hutterite sub-group	Other sub-group	Total group
5	0	0	4	4
4	3	0	5	8
3	13	6	49	68
2	17	14	68	99
1	3	3	11	17
Tot.	36	23	137	196

Total Scores:

(1) Indian	(5x0) + (4x3) + (3x13) + (2x17) + (1x3)	=	88
(2) Hutterite	(5x0) + (4x0) + (3x6) + (2x14) + (1x3)	=	49
(3) Other	(5x4) + (4x5) + (3x49) + (2x68) + (1x11)	=	334
Total			471

Mean Scores:

(1) Indian	88/36	= 2.4	5 (Highest)
(2) Hutterite	49/23	= 2.1	4
(3) Other	334/137	= 2.4	3
Total	471/196	= 2.4	2
			1 (Lowest)

TABLE 31

CARDSTON SCHOOL DIVISION HANDWRITING SCORES
ON THE SASKATOON PUBLIC SCHOOL HANDWRITING SCALE
GRADE VI 1977-78

Score	Number of pupils			
	Indian sub-group	Hutterite sub-group	Other sub-group	Total group
5	0	0	2	2
4	3	1	11	15
3	13	9	56	78
2	14	11	61	86
1	8	1	25	34
Tot.	38	22	155	215

Total Scores:

(1) Indian	(5x0) + (4x3) + (3x13) + (2x14) + (1x8)	= 87
(2) Hutterite	(5x0) + (4x1) + (3x9) + (2x11) + (1x1)	= 54
(3) Other	(5x2) + (4x11) + (3x56) + (2x61) + (1x25)	=369
Total		510

Mean Scores:

(1) Indian	87/38	= 2.3	5 (Highest)
(2) Hutterite	54/22	= 2.5	4
(3) Other	369/155	= 2.4	3
Total	510/215	= 2.4	2
			1 (Lowest)

TABLE 32

CARDSTON SCHOOL DIVISION HANDWRITING SCORES
ON THE SASKATOON PUBLIC SCHOOL HANDWRITING SCALE
GRADE IV PUPILS OF 1975-76 FOR WHOM
THERE ARE ALSO HANDWRITING SCORES IN GRADE VI IN 1977-78

Score	Number of pupils			
	Indian sub-group	Hutterite sub-group	Other sub-group	Total group
5	0	0	0	0
4	2	2	15	19
3	8	5	51	64
2	7	3	43	53
1	1	6	11	18
Tot.	18	16	120	154

Total Scores:

(1) Indian (5x0) + (4x2) + (3x8) + (2x7) + (1x1) = 47
(2) Hutterite (5x0) + (4x2) + (3x5) + (2x3) + (1x6) = 35
(3) Other (5x0) + (4x15] + (3x51) + (2x43] + (1x11) = 310
Total 392

Mean Scores:

(1) Indian	47/18	= 2.6	5 (Highest)
(2) Hutterite	35/16	= 2.2	4
(3) Other	310/120	= 2.6	3
Total	392/154	= 2.5	2
			1 (Lowest)

TABLE 33

CARDSTON SCHOOL DIVISION HANDWRITING SCORES
ON THE SASKATOON PUBLIC SCHOOL HANDWRITING SCALE
GRADE VI PUPILS OF 1977-78 FOR WHOM
THERE WERE ALSO HANDWRITING SCORES IN GRADE IV IN 1975-76

Score	Number of pupils			
	Indian sub-group	Hutterite sub-group	Other sub-group	Total group
5	0	0	1	1
4	3	1	7	11
3	8	8	47	63
2	6	8	50	64
1	0	1	14	15
Tot.	17	18	119	154

Total Scores;

(1) Indian	(5x0) + (4x3) + (3x8) + (2x6) + (1x0)	= 48
(2) Hutterite	(5x0) + (4x1) + (3x8) + (2x8) + (1x1)	= 45
(3) Other	(5x1) + (4x7) + (3x47) + (2x50) + (1x14)	= 288
Total		= 381

Mean Scores:

(1) Indian	48/17	= 2.8	5 (Highest)
(2) Hutterite	45/18	= 2.5	4
(3) Other	288/119	= 2.4	3
Total	381/154	= 2.5	2
			1 (Lowest)

(1975-76) are compared with the mean scores of those Grade IV pupils, there would seem to be no overall difference. There are some minor differences in the mean scores of the sub-groups, in general favoring the Indian and Hutterite pupils.

TABLE 34

MEAN SCORES ON HANDWRITING FOR CARDSTON SCHOOL DIVISION PUPILS IN GRADE IV (1975-76), GRADE VI (1975-76), AND GRADE VI (1977-78) BASED ON THE USE OF THE SASKATOON PUBLIC SCHOOL HANDWRITING SCALE TOTAL GROUPS

Grade and Year	Indian sub-group	Hutterite subgroup	Other sub-group	Total group
Grade IV 1975-76	2.6	2.2	2.6	2.6
Grade VI 1975-76	2.4	2.1	2.4	2.4
Grade VI 1977-78	2.3	2.5	2.4	2.4

TABLE 35

MEAN SCORES ON HANDWRITING FOR CARDSTON SCHOOL DIVISION PUPILS IN GRADE IV (1975-76) FOR WHOM THERE ARE ALSO HANDWRITING SCORES IN GRADE VI IN 1977-78

Grade and Year	Indian sub-group	Hutterite sub-group	Other sub-group	Total group
Grade IV 1975-76	2.6	2.2	2.6	2.5
Grade VI 1977-78	2.8	2.5	2.4	2.5

As measured by the Saskatoon Public School Handwriting Scale, the applied handwriting of the pupils whose written compositions were scored showed few changes as between 1975-76 and 1977-78.

Concluding Statement

The external evaluation team suggests that handwriting as a form for communicating ideas might well receive further attention in future programming and curricular planning. In these days of typewriters, calculators and computers, we may be inclined to discount the importance of legible and mature handwriting.

PART VII

OUTCOMES OF THE CARDSTON SCHOOL DIVISION LANGUAGE ARTS IMPROVEMENT PROGRAM OTHER THAN THOSE EVALUATED THROUGH FORMAL CLASSROOM OBSERVATION AND ACHIEVEMENT AND SELF-CONCEPT TESTING

Introduction

In an effort to provide opinions concerning possible outcomes of the Cardston School Division Language Arts Improvement Program other than those being evaluated through formal classroom observation and achievement and self-concept testing, an approach, using a modification of the so-called Delphi technique, was devised to secure the opinions of knowledgeable parents and teachers. The technique used consisted of having a panel of informed participants, once the setting or context had been given, originate statements about possible outcomes of the language arts improvement program, having the evaluation team educe from the submissions of the participants a set of discrete statements embodying the ideas they had presented, and having the participants indicate with respect to each statement whether they strongly agreed, agreed with reservation, disagreed, were neutral, or considered that they had insufficient information on which to make a judgment. In the modified use of the Delphi technique as applied in the present study, the evaluation team attempted to

maintain the advantages claimed for it: consensus without face to face encounter, anonymity of panelists, controlled feedback, and statistically descriptive group responses. The technique is designed to eliminate "... committee activity altogethar, thus further reducing the influence of certain psychological factors such as specious persuasion, the unwillingness to abandon publicly expressed opinions and the 'bandwagon' effect of majority opinion." (Helmer and Rescher, "On the Epistemology of the Inexact Sciences," Management Science, 1959).

Assumptions

The study reported below was based on the following assumptions:

1. That the original panel of sixty-four persons is representative of the informed and concerned parents and teachers of elementary school pupils in the Cardston School Division.

2. That those who agreed to participate in the study are representative of the informed and concerned parents and teachers in the total panel of sixty-four. Fifty-nine percent of the parents and eighty-seven percent of the teachers invited to participate completed Part I of the study. Eighty-seven percent of the parents and one hundred percent of the teachers who completed Part I also completed Part II.

3. That there is as little bias as possible in the study. There is always the possibility of bias when the participants are self-selected from an original panel.

4. That the results will be interpreted as informed opinion and not as statistically verified fact.

Procedure

A panel of sixty-four possible participants was provided to the external evaluation team by members of the administrative staff of the Cardston School Division. The following letter was sent to each of the sixty-four. Of the forty-two who replied, forty-one indicated a willingness to participate while one did not wish to do so.

March 6, 1978

Dear Friend(s) of Education:

As you know, the Cardston School Division No. 2 has been engaged in a three-year reading and language improvement program which will officially conclude at the end of June 1978. The program has been designed and carried through by the staff of the Division in consultation with Dr. Ethna Reid of the Exemplary Centre for Reading Improvement based in Salt Lake City.

To measure the effectiveness of the program, the Division appointed an external evaluation team consisting of Dr. Rex Wadham, Dr. Alvin Rencher and Dr. James Young (all of Brigham Young University) and me (as the Canadian coordinator). The external evaluation team has secured, to the extent that the results of normal observation and testing procedures make possible, a wealth of information about the effect of the program on teaching practices and on pupil achievement and self-concept development.

The external evaluation team believes that there may well be <u>results of the program other than those already measured by formal observation and testing</u>. They have asked me to write to a number of interested and informed parents and teachers to determine what they believe, from their knowledge and observation,

are the results--values and weaknesses--of the program. I am enclosing a form to determine whether you would be willing to participate in providing information that could be helpful in assessing the results of the program and in assuring continuing improvement of reading and language achievement of elementary pupils in the Division. We would welcome your participation and your opinions. (Whether or not you agree to participate, however, please return the enclosed form.)

If you agree to participate, as we hope you will, please complete the bottom section of the form by stating your conclusions and observations. Once I have received replies from all who agree to participate, I shall categorize the statements made and will send a follow-up form for you to complete. In total, your participation should not require more than a half-hour of your thoughtful time.

I can assure you that you will not be identified by name in the summary I plan to prepare for the external evaluation team. I shall protect your anonymity fully.

A self-addressed stamped envelope is enclosed for your reply. Since postal rates will increase on April 1, it would be appreciated if I might receive your reply before that date.

Yours sincerely,
(H. T. Coutts)

A follow-up reminder was mailed on April 1.

The forty-one participants who had expressed a willingness to become involved in the study returned the Part I form on which their statements were included. The more than two hundred statements provided by the participants seemed to present twenty-nine separate ideas. These were phrased in positive statements to which participants were asked to react indicating strong agreement, agreement with reservation, disagreement, neutrality, or inability to make a judgment because of insufficient information. Of the forty-two forms mailed as Part II of the study on May 1, thirty-seven were returned,

twenty-six by parents and eleven by teachers. The twenty-nine statements to which the participants reacted, some with solicited comments (See below) , follow with a brief analysis of the responses. It should be noted that these statements represent ideas generated by the participants and not by the external evaluation team.

Analyses of Data Statement by Statement

I. Items related to outomes of the Cardston School Division Language Arts Improvement Program other than those being measured more formally by classroom observation of teachers and pupils and by standardized tests.* These more formal evaluations are presented elsewhere in reports on this project.

Statement 1

There has been an increased interest in children reading for pleasure at home.

% Responses	Strongly Agree	Agree with Reservation	Disagree	Neutral	Insufficient Information
Parents	35%	19%	23%	8%	15%
Teachers	36%	18%	0%	0%	45%
Total	35%	19%	16%	5%	24%

*Rounded percentage figure may total 99, 100 or 101.

As might be expected, a higher percentage of the teacher participants indicated insufficient information on which to form a reasonable judgment. While 54% of the parent respondents showed some measure of agreement with the statement, it should be noted that 23% disagreed with it.

Statement 2

There has been an increased interest in children reading a wider variety of material at home.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient Information
Parents	23%	27%	27%	12%	12%
Teachers	27%	0%	0%	0%	73%
Total	24%	19%	19%	8%	30%

In reaction to this statement, the opinion of parents is naturally more likely to be valid. While 50% of the parents indicated some measure of agreement, 27% disagreed.

Statement 3

There has been an increased interest on the part of parents in the out-of-school reading and language activities of their children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	23%	46%	12%	8%	12%
Teachers	18%	36%	9%	0%	36%
Total	22%	43%	11%	5%	19%

Sixty-nine percent of parent participants indicated that they have taken increased interest in the out-of-school reading and language activities of their children. The frequency of comments would seem to verify this. The teacher participants are slightly less convinced.

Statement 4

There has been an increased interest on the part of parents to provide enriched reading material at home.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	27%	23%	31%	12%	8%
Teachers	18%	18%	9%	0%	55%
Total	24%	22%	24%	8%	22%

Fifty percent of parent participants indicated some measure of agreement with this statement. The 31% parent disagreement is based partly, at least, on the conclusion that they have always provided such material. The teacher participants in large measure left this item to the parents, who should be best able to react to it.

Statement 5

There has been an increased interest on the part of parents in the in-school reading and language activities of their children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient Information
Parents	42%	27%	4%	4%	23%
Teachers	45%	55%	0%	0%	0%
Total	43%	35%	3%	3%	16%

Did parents recognize an increased interest on their part in the in-school reading and language activities of their children? Sixty-nine percent of the parent participants showed some measure of agreement. The teacher participants were unanimous in recognizing such interest on the part of parents.

Statement 6

There has been an improvement in spelling in the out-of-school written work (letters, etc.) of the children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	38%	31%	27%	0%	4%
Teachers	8%	33%	0%	0%	58%
Total	29%	32%	19%	0%	21%

Parents should be best able to react to this statement. Sixty-nine percent indicated some measure of agreement, while 27% disagreed. It should be interesting to compare these opinions with the results of the formal achievement testing.

Statement 7

There has been an improvement in printing or handwriting in the out-of-school written work (letters, etc.) of the children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	38%	19%	23%	15%	4%
Teachers	36%	9%	0%	0%	55%
Total	38%	16%	16%	11%	19%

Fifty-seven percent of the parent participants seemed to detect an improvement in printing or handwriting in the out-of-school written work of their children. It will be of interest to compare this opinion with the formal evaluation of handwriting on the creative compositions of the pupils in grades four and six.

Statement 8

There has been an observable interest in the children in increasing the vocabulary used (i.e., word power) in their out-of-school speaking and writing.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	38%	23%	15%	19%	4%
Teachers	9%	27%	0%	9%	55%
Total	30%	24%	11%	16%	19%

Sixty-one percent of the parent participants seem to have detected such an increase in word power. The

disagreement of 15% is relatively low. The large majority of the teacher participants indicated, naturally, insufficient information relative to this item.

Statement 9

There has been an observable growth in the accurate and colorful use of language by the children in their out-of-school speaking and writing.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	31%	31%	19%	12%	8%
Teachers	20%	30%	0%	0%	50%
Total	27%	30%	14%	8%	20%

Parents, who should be the better observers here, indicated that their children show an observable growth in the colorful use of language in out-of-school speaking and writing. Nineteen percent doubt this.

Statement 10

There has been a noticeable growth in pride of accomplishment on the part of the children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	38%	23%	27%	4%	8%
Teachers	82%	9%	0%	9%	0%
Total	51%	19%	19%	5%	5%

Sixty-one percent of the parent participants show some measure of agreement concerning their children's pride of accomplishment. Twenty-seven percent of the parent group disagreed. It is interesting to note that 91% of the teacher participants, ten of eleven, indicated a measure of agreement with respect to this item.

Statement 11

There has been an increased realization by children of their self-worth and self-image.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	23%	35%	27%	4%	12%
Teachers	64%	27%	0%	9%	0%
Total	35%	32%	19%	5%	8%

The teacher participants and, to a lesser extent, the parent participants, indicated increased realization by children of their self-worth and self-image. A substantial percentage of parents, 27%, disagreed.

Statement 12

There has been an improvement in teacher-pupil-parent relationships.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	27%	12%	15%	27%	19%
Teachers	45%	36%	0%	18%	0%
Total	32%	19%	11%	24%	14%

The percentage of both parents and teachers who remained neutral with respect to this item was relatively large. Both groups showed some agreement with the statement, 39% of the parent participants and 81% of the teacher participants.

Statement 13

There has been adequate communication between the school (administration and teachers) and the home with respect to the language arts improvement project.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	27%	35%	31%	4%	4%
Teachers	55%	36%	9%	0%	0%
Total	35%	35%	24%	3%	3%

While the teacher participants indicated agreement with respect to the communication factor, a substantial (31%) proportion of the parents still felt it inadequate.

Statement 14

The fact that the program is highly structured and the teaching specifically directed helps to keep the children interested and on task.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	31%	15%	31%	4%	19%
Teachers	36%	55%	0%	0%	9%
Total	32%	27%	22%	3%	16%

The parent participants were equally divided between strong agreement and disagreement with respect to the effect of the language arts improvement program on children's interest and task orientation. The teacher participants, whose opinions were obviously based on in-class observation, showed much greater general agreement with the statement.

Statement 15

The fact that the program is highly structured and the teaching specifically directed inhibits the creative teacher.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	54%	12%	0%	8%	27%
Teachers	18%	27%	36%	18%	0%
Total	43%	16%	11%	11%	19%

A large number of the parent participants (27%) felt that they had insufficient information on which to base a judgment with respect to the structured aspect of the program on teacher creativity. Sixty-one percent of the parent group gave the opinion that teacher creativity was inhibited. The teacher participants were divided between some agreement and disagreement with the statement.

Statement 16

The fact that the program is highly structured and the teaching specifically directed results in tensions or frustrations on the part of the teacher.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	20%	12%	12%	4%	52%
Teachers	18%	45%	18%	18%	0%
Total	19%	22%	14%	8%	36%

Fifty-two percent of the parent participants felt that they had insufficient information with respect to the effect of the structured aspects of the program on teacher tensions and frustrations. Significant is the fact that 63% of the teacher respondents agreed that such tension and frustration resulted. Eighteen percent of the teachers were neutral on this item.

Statement 17

The increased preparatory time the program requires of teachers results in improved daily planning, fewer control problems, and a better classroom atmosphere.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	15%	8%	12%	8%	58%
Teachers	45%	36%	18%	0%	0%
Total	24%	16%	14%	5%	41%

The majority of the parent participants, rightly we suppose, indicated that they had insufficient information with respect to this dominantly teacher-oriented item. Eighty-one percent of the teacher participants agreed that the increased preparatory time required had positive results: better planning, fewer control or discipline problems, a better classroom atmosphere.

Statement 18

There is provision for each child to progress at his or her level of interest and ability.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	46%	31%	15%	4%	4%
Teachers	73%	27%	0%	0%	0%
Total	54%	30%	11%	3%	3%

Both the parent and teacher participants agreed that there is provision in the program for each child to progress at his or her level of interest and ability.

Statement 19

The competitive aspects of the program result in tensions or frustrations on the part of the children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	54%	15%	23%	4%	4%
Teachers	9%	36%	55%	0%	0%
Total	41%	22%	32%	3%	3%

Sixty-nine percent of the parent participants indicated that the program results in tensions and frustrations on the part of the children. Twenty-three percent of the parent group disagreed. The teacher participants indicated 9% strong agreement, 36% agreement with reservation and 55% disagreement with this item.

Statement 20

The children accept greater responsiblity for their own learning.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	35%	35%	8%	15%	8%
Teachers	64%	36%	0%	0%	0%
Total	43%	35%	5%	11%	5%

Both the parent and teacher participants indicated some agreement with respect to children accepting greater responsibility for their own learning--an important goal for life-long education.

Statement 21

There is an increased involvement of the children in the learning activities in the classroom.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	23%	15%	4%	12%	50%
Teachers	91%	0%	9%	0%	0%
Total	42%	11%	5%	8%	34%

Teachers, who have the better opportunity to observe the classroom activities of pupils on a continuing basis, indicated strong agreement with respect to this item. The evaluation team is particularly interested in this item since it seems to indicate the involvement of both Indian and Other pupils in the learning activities of the classroom.

Statement 22

In general, the children seem to enjoy the language arts (reading and language) program.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	35%	31%	23%	12%	0%
Teachers	36%	55%	0%	9%	0%
Total	35%	38%	16%	11%	0%

There seemed to be general overall agreement that children enjoy their experiences in the language arts. A sizeable percentage (23%) of the parent group disagreed.

Statement 23

The use of mastery tests provides parents and teachers with a better understanding of the in-school progress of the children.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	42%	23%	23%	8%	4%
Teachers	73%	0%	18%	9%	0%
Total	51%	16%	22%	8%	3%

Both parent and teacher participants indicated some agreement that the mastery tests provide useful information about pupil progress, 65% and 73% respectively. Twenty-three percent of the parent group and 22% of the teacher group disagreed.

Statement 24

The use of mastery tests places a restraint on some teachers and pupils.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	42%	23%	8%	0%	27%
Teachers	27%	18%	55%	0%	0%
Total	38%	22%	22%	0%	19%

Twenty-seven percent of the parent respondents indicated that they had insufficient information on which to form a judgment with respect to this item. No one remained neutral. Of the rest of the parent group, 65% felt that the mastery tests do place a restraint on some teachers and pupils. Fifty-five percent of the teacher group, six of eleven teacher participants, did not recognize such restraints.

Statement 25

The in-school work habits of the children have improved.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	29%	7%	11%	11%	43%
Teachers	55%	36%	0%	0%	9%
Total	36%	15%	8%	8%	33%

Teachers, who work closely with children in the classroom, indicated that, in their opinion, the in-school work habits of the pupils have improved. The large number of the teacher participants indicating insufficient information on which to base a judgment is surprising. A sizable percentage (43%) of the parent group indicated insufficient information on which to form a judgment. The proportion of the parent group indicating agreement was larger than the proportion indicating disagreement.

Statement 26

There has been greater pupil retention of things learned in school.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	15%	19%	12%	4%	46%
Teachers	40%	30%	0%	20%	10%
Total	23%	23%	9%	9%	37%

Again, a large proportion of the parents (46%) indicated that they had insufficient information on which to form a judgment. Seventy percent of the teachers indicated

agreement. It should be interesting to compare this opinion with the results of the testing of retention on mastery tests conducted in 1976-77 and 1977-78.

Statement 27

Too large a proportion of in-school time is being spent on the language arts (reading and language) with a consequent reduction in the time being devoted to such subjects as mathematics, science, art, music, physical education.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	46%	8%	19%	8%	19%
Teachers	9%	55%	18%	9%	9%
Total	36%	19%	19%	8%	17%

There is sufficient agreement with this statement by both parents and teachers to suggest a closer look at the balance in future curriculum planning.

Statement 28

The language arts (reading and language) program has had positive results on the out-of-school attitudes of the children involved.

% Responses	Strongly agree	Agree with reservation	Disagree	Neutral	Insufficient information
Parents	38%	8%	15%	8%	23%
Teachers	18%	9%	0%	0%	73%
Total	34%	9%	11%	6%	40%

This is largely a parent-oriented item. The fact that a large proportion of the total group of participants

(parents and teachers) indicated insufficient information on which to make a reasonable judgment suggests that this statement may have lacked clarity of meaning. If so, we are responsible.

II. Items representing the opinions of parents and teachers on general information thought useful to the Cardston School Division.

Statement 29

The language arts (reading and language) program followed in the Cardston School Division in 1975 through 1978, probably with some modifications, should be continued with local leadership.

% Responses	Strongly agree	Agre with reservation	Disagree	Neutral	Insufficient information
Parents	38%	19%	27%	4%	15%
Teachers	64%	36%	0%	0%	0%
Total	45%	24%	18%	3%	11%

The purpose of including this item was to provide the Cardston School Division with some basis of guidance with respect to future planning. While 69% of the participants are in agreement that the language arts improvement program, probably with some modification, be continued, there is a substantial percentage of participants (18%) who disagree. This suggests the need for consultation and further efforts at meaningful communication between school and home. It seems

reasonable that the positive aspects of the language arts improvement program are worth incorporating into the teaching procedures and teaching style of the elementary school staff of the Division.

Generalizations

1. The emphasis in this study was on possible outcomes of the language arts improvement program other than those being evaluated by classroom observation and formal achievement and self-concept testing.
2. The opinions expressed in this study are meant to complement the formal observation and testing aspects of the evaluation of the language arts improvement program.
3. Parents were better able than teachers to respond to certain statements, e.g. 1,2,3,4,6,7,8,and 9.
4. Teachers were better able than parents to respond to certain other statements, e.g., 12, 15, 16, 17, 21, 24, 25, and 26.
5. Statement 28 was apparently confusing to both parents and teachers.
6. There are examples of polarization of opinion by parents and teachers with respect to some of the statements. Those with negative reactions seem to remain consistently negative; those with positive reactions, on the other hand, tend to remain positive.

7. A smaller proportion of teachers than parents remained neutral with respect to the statements.
8. The Cardston School Division should examine critically all information available to it as a basis for future curriculum and program planning.
9. Further efforts need to be made to improve communication between the school and the home in relation to curriculum and programming.
10. Teachers seem to be habituated (or conditioned) to responding to questionnaires.
11. The comments that follow in the next section of this report should be read in connection with the main part of this presentation.

Table 36 provides percentage responses to the twenty-nine statements presented to participants in this study.

Table 36

Summary Table of Percentage Responses to the Twenty-Nine Statements Presented to Participants in This Study

Item	Strongly Agree			Agree With Res.			Disagree			Neutral			Insuffic. Info.		
	P	T	Tot.	P	T	Tot.	P	T	Tot.	P	T	Tot.	P	T	Tot.
1	35	36	35	19	18	19	23	0	16	8	0	5	15	45	24
2	23	27	24	27	0	19	27	0	19	12	0	8	12	73	30
3	23	18	22	46	36	43	12	9	11	8	0	5	12	36	19
4	27	18	24	23	18	22	31	9	24	12	0	8	8	55	22
5	42	45	43	27	55	35	4	0	3	4	0	3	23	0	16
6	38	8	29	31	33	32	27	0	19	0	0	0	4	58	21
7	38	36	38	19	9	16	23	0	16	15	0	11	4	55	19
8	38	9	30	23	27	24	15	0	11	19	9	16	4	55	19
9	31	20	27	31	30	30	19	0	14	12	0	8	8	50	19
10	38	82	51	23	9	19	27	0	19	4	9	5	8	0	5
11	23	64	35	35	27	32	27	0	19	4	9	5	12	0	8
12	27	45	32	12	36	19	15	0	11	27	18	24	19	0	14
13	27	55	35	35	36	35	31	9	24	4	0	3	4	0	3
14	31	36	32	15	55	27	31	0	22	4	0	3	19	9	16
15	54	18	43	12	27	16	0	36	11	8	18	11	27	0	19
16	20	18	19	12	45	22	12	18	14	4	18	8	52	0	36
17	15	45	24	8	36	16	12	18	14	8	0	5	58	0	41
18	46	73	54	31	27	30	15	0	11	4	0	3	4	0	3
19	54	9	41	15	36	22	23	55	32	4	0	3	4	0	3
20	35	64	43	35	36	35	8	0	5	15	0	11	8	0	5
21	23	91	42	15	0	11	4	9	5	12	0	8	50	0	34
22	35	36	35	31	55	38	23	0	16	12	9	11	0	0	0
23	42	73	51	23	0	16	23	18	22	8	9	8	4	0	3
24	42	27	38	23	18	22	8	55	22	0	0	0	27	0	19
25	29	55	36	7	36	15	11	0	8	11	0	8	43	9	33
26	15	40	23	19	30	23	12	0	9	4	20	9	46	10	37
27	46	9	36	8	55	19	19	18	19	8	9	8	19	9	17
28	38	18	34	8	9	9	15	0	11	8	0	6	23	73	40
29	38	64	45	19	36	24	27	0	18	4	0	3	15	0	11

Note: P = Parent, T = Teacher, and Tot. = Total responses in percentage terms.
Agree with res. = Agree with reservation; Insuffic. Info. = Insufficient information.

PARTICIPANT COMMENTS

The following are the actual comments made by the participants in this study. They are purposely recorded in the order in which the responses were received with the complete anonymity of the respondents being preserved.

1. THERE HAS BEEN AN INCREASED INTEREST IN CHILDREN READING FOR PLEASURE AT HOME.

- The children like to read to each other and play school.
- We (as a team) teach grade one. We cannot judge. We do know, however, that because we are using Sullivan's Programmed Reading, which is very structured, that some children are able to break code for reading and read everything at about Book 5 level--other children cling to taught and known words, and there are practically zero number of books that are written for this course; so they are slower getting other reading.
- They have always liked to read a lot. As I have stated before, I can't say whether this has to do with our liking to read or to the school program.
- By some yes; by others no.
- Children have been on program since grade one. Little to compare to.
- Students take a wide variety of books home.
- The interest is somewhat delayed, however, possibly because of lack of extra reading materials at the Grade I level. In Grade III my girls read very little at home. Grade II slightly more interest, but by Grades III and IV the increased interest is apparent.
- My children prefer to read story books than watch T.V.
- Since my children are in Grades I and III and have been on only this program, I have little basis for comparison, but am generally pleased.

- My eldest child has gone through this system so I have nothing different to compare them with.
- She says she does a lot of free reading at school.
- Some of the stress made on reading a story three times, etc., has, I feel, caused some students to dislike reading for fun. I have had parents comment also to this.
- My three younger children on this program would read less than the four who are in high school and Grade IX who were not in the program if I had not taken steps to stimulate them.
- Our children were avid readers before they went on this program.
- I have no children at home. I don't have much contact with parents.
- I have three children in this program and it has got to be that they have lost interest in reading. The longer they are on the program, the less they want to read.
- They are too tired to bother with reading.
- We have seen no evidence that the program has increased the reading interest.
- Children do take home library books.
- I have more students than ever before telling me they visit the public library.

2. THERE HAS BEEN AN INCREASED INTEREST IN CHILDREN READING A WIDER VARIETY OF MATERIAL AT HOME.

- Children are branching off to newspapers, magazines, etc.
- I haven't really noticed this, although my 12 year old has read some books that are, I feel, beyond her understanding.
- By some yes; by others no.
- See comment in 1 above.
- Children bring books from home to school.
- They have been buying books instead of buying toys.

- See comment from 1 above.
- She does read more at home than other children have.
- The program doesn't stress different materials or different areas of reading.
- Newspapers, magazines, and even encyclopedias were a part of their reading library before we moved to Cardston.
- It has been just the opposite.

3. THERE HAS BEEN AN INCREASED INTEREST ON THE PART OF PARENTS IN THE OUT-OF-SCHOOL READING AND LANGUAGE ACTIVITIES OF THEIR CHILDREN.

- We are more aware and interested in what the children are doing in their free time.
- I would agree to the point I am concerned when they are behind in mastery tests (one daughter especially). I am interested in how they do in school.
- Some parents have to help them at home.
- Children have been on the program since grade one. Little to compare to.
- Parents are buying reading materials and tell us so.
- Any parent(s) interested in their child's education will show an interest--regardless of whether it is in language arts program or any other.
- Parents are very involved in listening to students read and in helping them study their Mastery Tests. I have found the majority are very interested.
- Yes, I am increasingly interested because I find I must work harder to get them to read.
- We have always been interested and encouraged our children in these areas even before they started school. We feel the right attitude of enjoyment towards reading is what will motivate them to read.
- If a parent was interested in their child's reading before, they still are. If they weren't interested, they still aren't.

- Most are probably like us, never informed of the subjects of the program and never told what we could do to help!

- The reason for our added interest is because of the inadequacies of the program brought to our attention.

- Some parents, yes.

- Those parents that are already interested are now very interested. Those that were so-so are still that way.

4. THERE HAS BEEN AN INCREASED INTEREST ON THE PART OF PARENTS TO PROVIDE ENRICHED READING MATERIAL AT HOME.

- We have made more effort to purchase books on other levels to increase word power and knowledge.

- I like to have good books, not because children have created an interest at home, but because my husband and I like to read.

- Parents are buying reading materials and tell us so.

- This would have occurred with or without the program--we believe reading very important.

- Our children have always been provided with enriched reading material.

- I have heard some parents say that they just can't keep enough reading material for their child.

- Perhaps in other homes, but I think most families that are interested in their children's reading were interested from the time they were little and had stories read to them.

- We have always encouraged and supplied our children with a good selection at home. They also have libraries. I can't say this program motivated us to do this as we did it before.

- I can only judge by our own home. We have always tried to provide reading material for our children at home.

- The cost factor curtails a great deal the availability of reading materials and in our instance the school provides only a small library which is not adequate. The village does not have a library facility. We have

to travel too far to use a library in either town close to us.

- Yes, some have come to me re this.

5. THERE HAS BEEN AN INCREASED INTEREST ON THE PART OF PARENTS IN THE IN-SCHOOL READING AND LANGUAGE ACTIVITIES OF THEIR CHILDREN.

- We have attended more often to see the books and watch the program work. Some reading material at schools needs screened.
- Some parents have worked more with their children because of the requirement to pass the mastery tests at school.
- Parents come to make inquiries as to the program.
- This test should be on every subject. Then you would get an answer to #27. The question to follow up on is: Does this program offer something better than what we have in Alberta? If so, let's have it; if not, drop it. Why not test our own children against others who do not have this program?
- They are eager to help and wish to be kept up-to-date with progress.
- The parents of the white children are interested in their children's performance; however, many Indian parents aren't.
- We're worried that this program might leave the better readers bored and lacking in basic language skills and simple spelling.
- Only because they want to find out why their children are having trouble in it and what on earth the program is about.
- We have a desire to find out what benefits this program is providing.

6. THERE HAS BEEN AN IMPROVEMENT IN SPELLING IN THE OUT-OF-SCHOOL WRITTEN WORK (LETTERS, ETC.) OF THE CHILDREN.

- One child in particular corrects her father's spelling.

- I can't say whether or not there is an improvement when I have no basis on which to judge. I think this holds true for a lot of these statements. I have stated this before.
- See comments on page 1.
- Pupils often are unable to spell "little" words.
- The children can spell large words, but many make mistakes in small, easier words.
- Our children are more concerned about spelling correctly.
- Absolutely not. My two teen agers were on the reading program for two years. Their spelling is absolutely horrible.
- My children are too young to be actually writing essays or reports of their own. Ideas, however, have improved.
- I doubt it.
- There is a great improvement in school so I would feel this carries over to out-of-school work also.
- These three children are very poor spellers. This is substantiated by their sister who received letters from them while at university.
- The harder words they know, but have difficulty with words like their, there, too, to, two, etc.
- No, there isn't.
- Definitely not! The program has in our case made our children lazy in regards to the use of the dictionary.
- Their written work never includes any of those words that they are required to spell. The basic words are not learned. The punctuation is very poor.
- Yes, in notes and letters I've intercepted.

7. THERE HAS BEEN IMPROVEMENT IN PRINTING OR HANDWRITING IN THE OUT-OF-SCHOOL WRITTEN WORK (LETTERS, ETC.) OF THE CHILDREN.

- More time is taken on accuracy and neatness.
- (No basis for comparison.)

- They print well. Again no basis for comparison.
- Decided improvement--children keep neater books and take pride in their written work.
- There is a great deal of time spent on penmanship. I feel the writing has greatly improved.
- Only when the teacher insists is time taken to write carefully. They are too used to writing as fast as they can to get all the written work done and pass the masteries.
- I expect my child to improve as they mature so have not seen any drastic improvement that I would credit the program with.
- There isn't enough time left to work at penmanship. Penmanship takes time to practise.

8. THERE HAS BEEN AN OBSERVABLE INTEREST IN THE CHILDREN IN INCREASING THE VOCABULARY USED (I.E., WORD POWER) IN THEIR OUT-OF-SCHOOL SPEAKING AND WRITING.

- They like to look up unknown words in the dictionary.
- Don't think it's a conscious interest--but vocabularies have improved.
- They rarely use many of the words.
- They use a dictionary a great deal.
- Most of the words in the higher masteries just are not part of everyday English.
- The words they are learning in a lot of instances are words I've never used and, although they know the meaning, they have no reason to ever use them.
- The vocabulary is never used again after the mastery test is passed.

9. THERE HAS BEEN AN OBSERVABLE GROWTH IN THE ACCURATE AND COLORFUL USE OF LANGUAGE BY CHILDREN IN THEIR OUT-OF-SCHOOL SPEAKING AND WRITING.

- Haven't noticed too much use of colorful language in just everyday speaking (too young yet).

- Could be. They learn a lot of different words, but I haven't really noticed the everyday usage of new words.
- Difficult to say.
- They do, however, recognize some mastery words when adults use them.
- The students are able to express themselves better.
- No change.

11 . THERE HAS BEEN A NOTICEABLE GROWTH IN PRIDE OF ACCOMPLISHMENT ON THE PART OF CHILDREN.

- They like to do things well. They like to be complimented.
- Children, even the slower ones, appear happier.
- Our two girls are both reading above grade level. From observations as a substitute teacher, I don't believe this is true of all children. It's great if you're at the top, but can be discouraging sometimes if you're not.
- This would be true when a child passes any series of tests, not only in the language arts program.
- Some students have improved. There are some, however, who don't really care.
- Mostly it's either frustration from being behind, or from waiting for the teacher to pass them off or relief at being through another one.
- No change.
- I feel that trying to learn the other subjects must be frustrating because there's not enough time in class to get the basics. Assignments have been made to do work on which the child has no background whatever.
- 1. Printing. 2. Neatness of notebooks.

11. THERE HAS BEEN AN INCREASED REALIZATION BY CHILDREN OF THEIR SELF-WORTH AND SELF-IMAGE.

- Inferiority complexes are lessened because they know something someone else doesn't.

- Hard to tell?!
- Difficult to say.
- I feel very strongly about this. Youngsters are more sure of themselves. Positive reinforcement is the reason.
- This realization is not always positive. The slower child finds out he is at the bottom of his class. This is not good.
- It certainly depends on the teacher. Some experiences have been good--some very bad.
- Some students do feel because others are always reinforced that they must have something wrong.
- From my own experience and that of several other parents I've talked to too many children are getting a feeling of failure from not being able to keep up with the teacher as she (he) speeds through mastery after mastery.
- If anything it has hindered--more of giving them a feeling of failure than self-worth.
- I think the program tends to label those who have problems by having the slow learners spend most of their time with aides.
- The competition is very strong in this program. Some children can handle it, but in others I feel that it damages their self-image and they class themselves as under achievers.
- When children learn to read and write, they only know the way they have been taught so they themselves haven't any realization (of) themselves.
- A child will work his or her head off for nothing else than the satisfaction of passing a test.

12. THERE HAS BEEN AN IMPROVEMENT IN TEACHER-PUPIL-PARENT RELATIONSHIPS.

- The program gives more opportunities to discuss and communicate with each other.
- I also am a teacher.
- I have always felt parents and teachers worked together for the benefit of the child. A program neither helps nor hinders.

- Can work both ways.
- I feel I communicate a lot with the parents because they know what's going on.
- Problem children are probably still problems, and uninterested parents are probably still uninterested.
- No change.
- I think this has always been quite good in our school system.
- My children have generally good relationships, but I couldn't think it is because of this reading program. Personalities play the most important role.
- I don't understand how.

13. THERE HAS BEEN ADEQUATE COMMUNICATION BETWEEN THE SCHOOL (ADMINISTRATION AND TEACHERS) AND THE HOME WITH RESPECT TO THE LANGUAGE ARTS IMPROVEMENT PROGRAM.

- Some teachers and parents are more interested and informed about the program.
- I suppose all that is necessary. I don't know whether I know all there is to (know) about the program or not, but sometimes I feel I need to contact the teachers more, but I don't like to pester them.
- Parents have been questioned and invited to sessions about the program.
- There are some parents who don't come for conferences, etc.--who don't have a clue what's going on.
- No communication except a very biased questionnaire, and teachers seem almost afraid to discuss only negative aspects of the program.
- Except those with learning problems. This is unfortunate.
- The teachers have been very kind explaining the program, but I have never heard of an administrator having a meeting to acquaint parents to (sic) the program.
- Depends entirely upon the teacher, administrators and parents involved.

- The School Division never even gave parents the right to decide if they wanted their children to be guinea pigs, and I don't feel that there is enough general knowledge of aims so parents know what to look for.

- Most parents do not understand the program at all. As parents we don't understand why we need change from the old system.

14. THE FACT THAT THE PROGRAM IS HIGHLY STRUCTURED AND THE TEACHING SPECIFICALLY DIRECTED HELPS TO KEEP THE CHILDREN INTERESTED AND ON TASK.

- Especially in an open area school. Some difficulties have arisen.

- Have not participated.

- Sometimes program seems too rigid. We sometimes miss.

- I have seen very few children continually interested and on task. Most children, particularly creative children and slow learners, need a variety of approaches, I feel.

- Not always interested.

- Sometimes it's also very boring.

- Depending on the teacher from one year to the next.

- If the above program is used as outlined, there is no time left to be off task.

- Some parts of the program are boring to some children.

- Quick-learning children get tired of the same old routine all year every year; slow learners get frustrated and maybe average are content, but not motivated to improve.

- A lot of children are not interested. They dread it.

- They know what to do which is good. It can become tireseome for them.

- It must get tedious doing the same thing every morning ten months a year.

- There is a lot of valuable time wasted on the presentation of words.

- It keeps the children interested for a while, but the repetition gets very boring; therefore, they become disinterested.
- Some of the very sharp students tend to become a little bored if supplementary material is not used.

15. THE FACT THAT THE PROGRAM IS HIGHLY STRUCTURED AND THE TEACHING SPECIFICALLY DIRECTED INHIBITS THE CREATIVE TEACHER.

- Some teachers are better equipped to handle the program.
- Too much.
- This seems to be the case.
- A creative teacher will be creative no matter what the program. There is room for imagination.
- Teacher must be more creative than ever before.
- There are lots of things the teacher is limited in because they have to do so many things there is no time to use our own ideas.
- There is no time for creativity let alone a channel where it can be used.
- There are complaints teachers had given me. They know a child's progress, but cannot help certain ones because of their problems and the structure of the program conflict.
- In some ways, yet the teacher can learn to add to the program, although it is not suggested to do so by ECRI.
- This depends on the teacher.
- Most definitely. New concepts and interests have to be put aside for the monotony of this program.

16. THE FACT THAT THE PROGRAM IS HIGHLY STRUCTURED AND THE TEACHING SPECIFICALLY DIRECTED RESULTS IN TENSIONS OR FRUSTRATIONS ON THE PART OF THE TEACHER.

- The structure makes preparation necessary and it is not necessary to be frustrated.

- The individual testing and the increased number of skills to be taught takes more time than is available. The structuring, however, keeps the teacher on task.
- This seems to be the sentiment of those teachers with whom we have talked.
- It is much simpler to follow the directives.
- In many ways, it is easier for the teacher.
- I'm not a teacher in this system.
- There is more preparation required, but if teachers take the necessary time, there should be no tension.
- As I said before, teachers seem afraid to discuss the program negatively so how do we know how they feel?
- The increased preparatory time takes away from these because it is used in making charts and cards which could be provided.
- In no way!
- Yes, because the program is too time-consuming and doesn't have enough time for other subjects just as important.

17. THE INCREASED PREPARATORY TIME THE PROGRAM REQUIRES OF TEACHERS RESULTS IN IMPROVED DAILY PLANNING, FEWER CONTROL PROBLEMS, AND A BETTER CLASSROOM ATMOSPHERE.

- Too much tension (through) German and English (language studies).
- Preparation time is about one hour per day. Teachers have always spent an hour or so after school. Under the program all work is corrected in class and students enjoy this.
- My observations have been that classroom control and atmosphere suffers while the teacher is busy with one pupil at a time.
- Definitely! Every second is accounted for.
- Because the program is highly structured, the teacher and children do know what to do, but not all students can work like this.

- What preparation? The words are on the sheets and the complete outlining is there. The only planning is in how to find time to listen to each student pass each mastery.
- And greater satisfaction!
- Without the help of aid(e)s no teacher would have sufficient time to make all charts, etc., and still have time to prepare other lessons in other subjects.

18. THERE IS PROVISION FOR EACH CHILD TO PROGRESS AT HIS OR HER LEVEL OF INTEREST AND ABILITY.

- Some children are naturally able to handle and understand things more quickly than others. For this the program is great.
- I have found with one of my daughters that she has been prepared to pass a mastery test, but does not have the opportunity for 2 or 3 days, sometimes longer. I feel she gets too far behind because of this delay.
- The push is always on to be passing mastery tests.
- The whole program is based on individual progress.
- Not true for some high achievers--some parts of program (are) boring, especially teaching new words.
- This program is designed to force students to keep up with the teacher or feel like a failure. There is a high competitive spirit among the students too.
- There is supposed to be, but many times they are ahead or behind their levels and are terribly frustrated and bored. It just isn't working as they say it should. How is the child tested?
- Teacher can downplay competition.
- This is the problem with the whole program. How does a child progress at his own level of ability without discipline?
- They are pushed if their learning abilities are not up to par with the majority of the class.

19. THE COMPETITIVE ASPECTS OF THE PROGRAM RESULT IN TENSIONS OR FRUSTRATIONS ON THE PART OF THE CHILDREN.

. I can only speak from experiences of my children. They want to advance at least to keep up with other students. They feel it is fun to compete.

. With reservations. A child that is of highly competitive nature may, but normally we have found this is not so. Any type of teaching work may or may not be competitive.

. This doesn't seem to be a true statement in our home.

. The more capable children thrive on this competition while those who have less ability become frustrated faster because they cannot keep up with the work load.

. Children help each other!

. This affects only some children.

. My Grade-oner is a nervous wreck after only eight months at school. She has developed stomach problems which the doctor claims are probably due to the program.

. This occurs only if my children fall behind due to absence. They are in the top groups and seem to love the challenge.

. Usually occurs at first of year or when first introduced to the program.

. To the point of bed-wetting, etc. until some changes were made.

. Also other parents have mentioned this.

. Some students are pressured, but most eat up competition.

. I have many students who, as soon as they know they are being timed, can't do it.

. Especially those who have a more difficult time keeping up.

. After they have finished their work on a unit, they have to wait to be tested. My one child had a full month's wait until I mentioned it to the teacher. As a result he fell quite far behind. I do not like this method as it happens every so often.

- It drives some children to cheat to stay ahead of another.
- Very minimal.
- This program tends to put many more pressures on the younger children if they are in the slower part of the class.

20. THE CHILDREN ACCEPT GREATER RESPONSIBILITY FOR THEIR OWN LEARNING.

- They gain a feeling of accomplishment.
- This seems to be the case.
- The children are required to do more on their own. Some work quickly and independently. Most, however, need to be encouraged and often to work alone.
- Their interests have to be channelled to some extent.
- I feel that when children do accept this responsibility, it is really great; however, those who don't flounder and waste a lot of time.
- This responsibility is taught at home (or should be).
- They have to. We are too busy.
- For example, my class of Grade II's know exactly what to do; there's no need for me to say anything.
- They do work on their own to get ready to pass a mastery, but only because the pressure is on to pass.
- From what I have found out I would agree, but I haven't discussed this very much as I feel I should check as I did until I find out more.
- Some children thrive in this program, but the unmotivated child does not progress without a lot of extra push from the teacher. How many children are mature enough to make the decision?

21. THERE IS AN INCREASED INVOLVEMENT OF THE CHILDREN IN THE LEARNING ACTIVITIES IN THE CLASSROOM.

- Shy students become part of the group.

- However, they sometimes resist learning anything that isn't on a mastery.
- The student is constantly involved in discussions, interviews, etc.
- They do have to get specific work done in order to pass a mastery, but . . .

22. IN GENERAL, THE CHILDREN SEEM TO ENJOY THE LANGUAGE ARTS (READING AND LANGUAGE) PROGRAM.

- They use the ideas learned at school to play school at home.
- Especially on some children.
- There are times when students become bored with so much rote work. They do seem to enjoy most of the exercises.
- Competitive children enjoy it most. Some children don't enjoy it at all.
- None of my three children enjoy it.
- Depending on the class and competitiveness of the teacher.
- Some teachers follow the program; others do not.
- Some get tired of doing the same thing over and over. Also reading a story three times becomes tiring.
- The children seemed to enjoy the program at first, but are now finding the repetition and sameness of the program boring and nerve wracking.
- Other children seem sometimes bored, other times frustrated, but never enjoying.
- Just the opposite.
- Again, depends on the teacher and how it is presented.
- They are pleased with their ability to read, but get tired of the studying all the time and of the constant repetition.

23. THE USE OF MASTERY TESTS PROVIDES PARENTS AND TEACHERS WITH A BETTER UNDERSTANDING OF THE IN-SCHOOL PROGRESS OF THE CHILDREN.

- This is a visible idea of the child's progress.
- There are no report cards or comparisons between children made available to parents--How can you make a reasonable judgment?
- But only there progress as to reading and spelling given words.
- No, I don't want to know if my child can spell and pronounce 20 words in 18 seconds, etc. I want to know if they know and can spell the words. I want them to know their basic words first, then build on that knowledge.
- A better understanding of how much work has been done, yes, but not if that child can really read and write.
- Masteries only reveal progress in one facet of a child's education.
- How many parents see the results of the mastery tests? If they do, what does it mean to them?

24. THE USE OF MASTERY TESTS PLACES A RESTRAINT ON SOME PUPILS.

- It's a goal, not a restraint.
- Students work at their own pace. Teachers can be as imaginative as they wish. The mastery tests provide a wealth of material.
- Yes--but in most cases it's good kind like a speed limit or a law.
- A child can be very bright but a slow worker and the teacher and child can do nothing about it but set the child back farther in the work.
- Some children can already spell, and don't need them.
- Other interesting points are often limited because there is never sufficient time allowed, e.g., social studies.
- Some children just can't read quickly and spell accurately.

25. THE IN-SCHOOL WORK HABITS OF THE CHILDREN HAVE IMPROVED.

- They seem to have (a) longer attention span, to concentrate deeper and longer.
- Comparison difficult.
- For most children. Those who haven't developed the responsibility mentioned in #20 have not improved their work habits.
- In fairness to the school I must say that they had a specific home-and-school meeting where this program was discussed, but I was unable to attend as I was conducting another meeting that evening.
- The teacher can answer this and #26 best.
- They are no behavior problems.
- There seems there is a lot of time for idle chatter and then homework to catch up. Teachers are too busy with other children to see that all are working.
- Productive time has decreased. Better use of time could be incorporated to this program.

26. THERE HAS BEEN GREATER RETENTION OF THINGS LEARNED IN SCHOOL.

- On my own children I have not noticed this greater retention. They seem to be happy to put it behind them--forget all about it.

27. TOO LARGE A PROPORTION OF IN-SCHOOL TIME IS BEING SPENT ON THE LANGUAGE ARTS (READING AND LANGUAGE) WITH A CONSEQUENT REDUCTION IN THE TIME DEVOTED TO SUCH SUBJECTS AS MATHEMATICS, SCIENCE, ART, MUSIC, AND PHYSICAL EDUCATION.

- I feel the time is allotted quite sufficiently.
- You can spend too much time. Learning to read and think and write are three of the four necessary things in life.
- A large proportion of time on language arts in primary grades is necessary, but could be reduced at upper elementary levels.

- Our children are or have to learn German by day and night homework and some have work from English teacher and that gives them too much pressure and strain on them.
- I do not know how other teachers timetable their day.
- The program doesn't seem to allow for correlation between subjects. It seems feasible that occasionally a mastery list could be made up of science words for example, and science concepts reinforced through the language arts program. Each subject seems to be separate and I feel they should support each other.
- Reading isn't everything you'd like your child to enjoy or that they excel in.
- The language arts improvement program covers writing, spelling, reading, dictation. I can't feel you spend more than you would on any other program--if you schedule properly.
- The only subject that may suffer somewhat is math. Language arts is very important.
- Unless this reading program is branched out more to include more time for basic writing skills and <u>literature enjoyment</u>.
- Three hours a day on that is way too long.
- I don't know how much time is spent on this program.
- This has to be my biggest complaint!
- 700 minutes of language arts--compared to 200 minutes of mathematics, for example.

28. THE LANGUAGE ARTS (READING AND LANGUAGE) PROGRAM HAS HAD POSITIVE RESULTS IN THE OUT-OF-SCHOOL ATTITUDES OF THE CHILDREN INVOLVED.

- They seem to enjoy school more than ever before. The language arts program could be <u>one</u> reason.
- (Not enough information for a judgment): though I believe so.
- Very definitely. It is the most constructive and positive program I have ever seen.

- Depends on the child and whether he's at the top or bottom. The modifications should be decided by the individual teacher as she works with each individual student.

- I support it completely.

- This program stifles teachers from using programs on their own initiative to bring children along. I believe the children are tired of being programmed like computers. Some of the teachers are hiding behind this program because it requires no inspiration or initiative of their own. I think the program could be used with modification in some very important areas.

- Children are pleased to know their progress unless they are behind.

- Just the opposite on the majority of children.

29. THE LANGUAGE ARTS (READING AND LANGUAGE) PROGRAM IN THE CARDSTON SCHOOL DIVISION IN 1975 THROUGH 1978, PROBABLY WITH SOME MODIFICATIONS, SHOULD BE CONTINUED WITH LOCAL LEADERSHIP.

- Not fully understanding the question, I do feel the program should be continued, at least until the children are out of elementary school.

- We will even without leadership.

- The allotment of time.

- Progress has been made and we do have excellent local leadership.

- The positive reinforcement that has been taught along with the reading program, I feel, is excellent and should be continued. As far as the mastery test reading program itself goes, I would be happy to see it discontinued.

- Teachers should be allowed to be as flexible as possible re what part of the program they would like to use.

- It seems to make machines of the students--write the words, spell the words, use them in a sentence, pass them off and begin over. Children are too different in their learning needs and abilities to have such a narrow learning program.

- I suggest that it be followed, especially for students with reading problems.
- If you wish, I could get a long list of names of people supporting my stand. (Thank you for giving me a chance to participate in this evaluation).
- (Depends on the modifications). For those who want to use it.
- I think there needs to be a great deal of modification.
- More refinement should be made to this program before it is implemented into our school system. (Why change?)

PART VIII

PUPIL PERCENTAGE ATTENDANCE
1973-76 through 1977-78

Introduction

To the percentage attendance information provided previously for the years 1973-74 through 1976-77 have been added to the data for 1977-78. The percentage figures for the Indian and Other pupils cover the full five years, 1973-74 through 1977-78, while those for the Hutterite pupils cover only the years 1976-77 and 1977-78.

The percentage attendance data were analyzed as follows:

1. for the total group.
2. For the total Indian and Other groups.
3. For the total Hutterite group.
4. For individual schools:
    - 4.1 The Cardston Elementary School.
    - 4.2 The Magrath Elementary School.
    - 4.3 The Glenhill School.
    - 4.4 The Del Bonita School.
    - 4.5 The Mountain View School.

Table 37 following summarizes the percentage attendance of the Indian and Other pupils in the Cardston School Division from 1973-74 through 1977-78. Table 38

Table 37

Summary of Percentage Attendance of Indian and Other Pupils in the Cardston School Division No. 2 for the School Years 1973-74 through 1977-78 (Elementary Pupils Only)*

School	1973-74		1974-75		1975-76		1976-77		1977-78	
	Indian	Other	Indian	Other	Indian	Other	Indian	Other	Indian	Other
Cardston	82.0	93.2	78.4	91.9	83.4	94.5	85.0	96.0	82.5	94.7
Magrath	84.5	93.3	67.9	95.7	77.4	95.2	87.7	96.4	84.6	95.3
Glenhill	82.4	94.8	84.1	93.6	78.2	92.7	82.2	93.7	78.0	93.7
Del Bonita		95.5		94.9		94.3		95.3		96.7
Mountain View		96.3		96.0		96.4		96.3		95.5
Averages	82.9	94.6	76.8	94.4	79.6	94.6	84.9	95.5	81.7	95.2

Table 38

Summary of Percentage Attendance of Hutterite Pupils in the Cardston School Division No. 2 1973-74 through 1977-78**

1973-74	1974-75	1975-76	1976-77	1977-78
No data reported	No data reported	No data reported	96.0**	95.4**

* From data provided by the Cardston School Division No. 2.

** The percentage attendance reported was consistently high from month to month.

summarizes the percentage attendance for all Hutterite schools within the Division for the years 1976-77 and 1977-78, the only years for which such data were provided.

ANALYSIS OF PERCENTAGE ATTENDANCE DATA

Figure 1 following presents graphically the percentage data of the Indian and Other groups in total for the school years 1973-74 through 1977-78. During these years the percentage attendance of the total Indian group dropped from 82.9 in 1973-74 to 76.8 in 1974-75, rose to 79.6 in 1975-76 and to 84.9 in 1976-77, then dropped to 81.7 in 1977-78. There does not appear to have been any overall trend with respect to percentage attendance of this sub-group.

During the same years, the percentage attendance of the total Other group dropped from 94.6 in 1973-74 to 94.4 in 1974-75, rose to 94.6 in 1975-76 and to 95.5 in 1976-77, then dropped slightly to 95.2 in 1977-78. No trend is apparent, nor would it be possible to attribute any changes from year to year to the ECRI training program.

Total Hutterite Group

Figure 2 presents graphically the percentage attendance data of the Hutterite sub-group for the school years 1976-77 and 1977-78. While there was a slight drop in percentage attendance from 96.0% in 1976-77 to 95.4 in

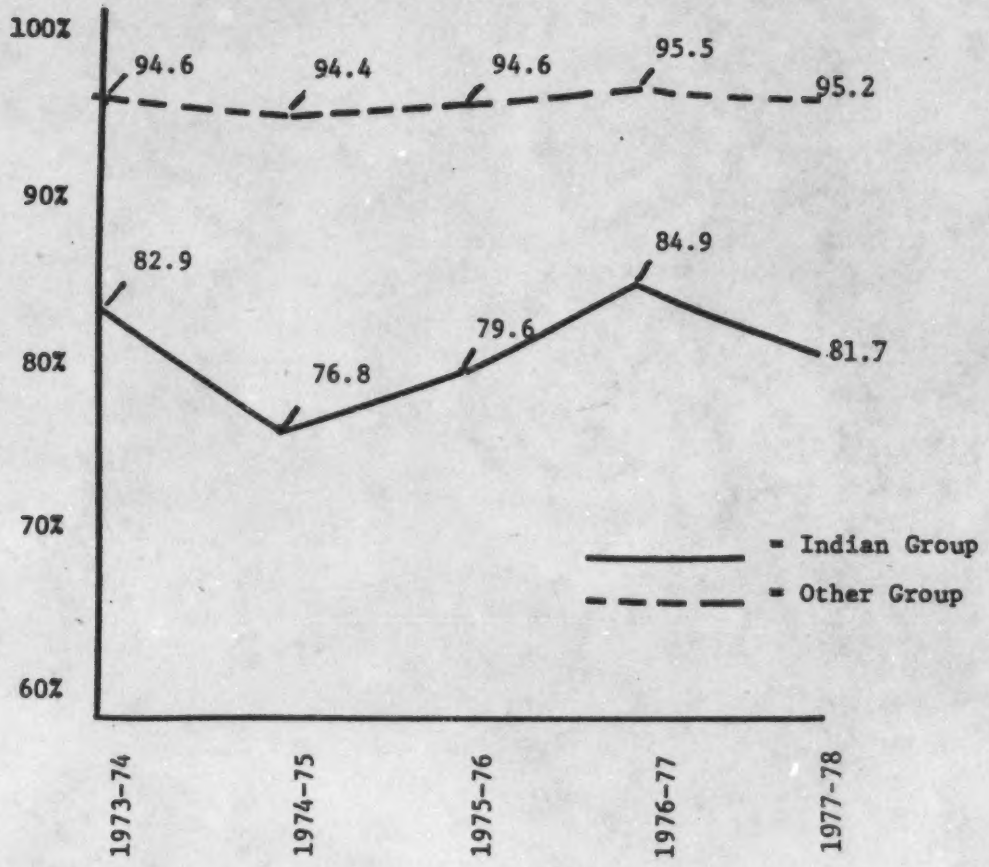

Figure 1

Percentage Attendance of Indian and Other Sub-groups in Total for the Cardston School Division No. 2 1973-74 through 77-78

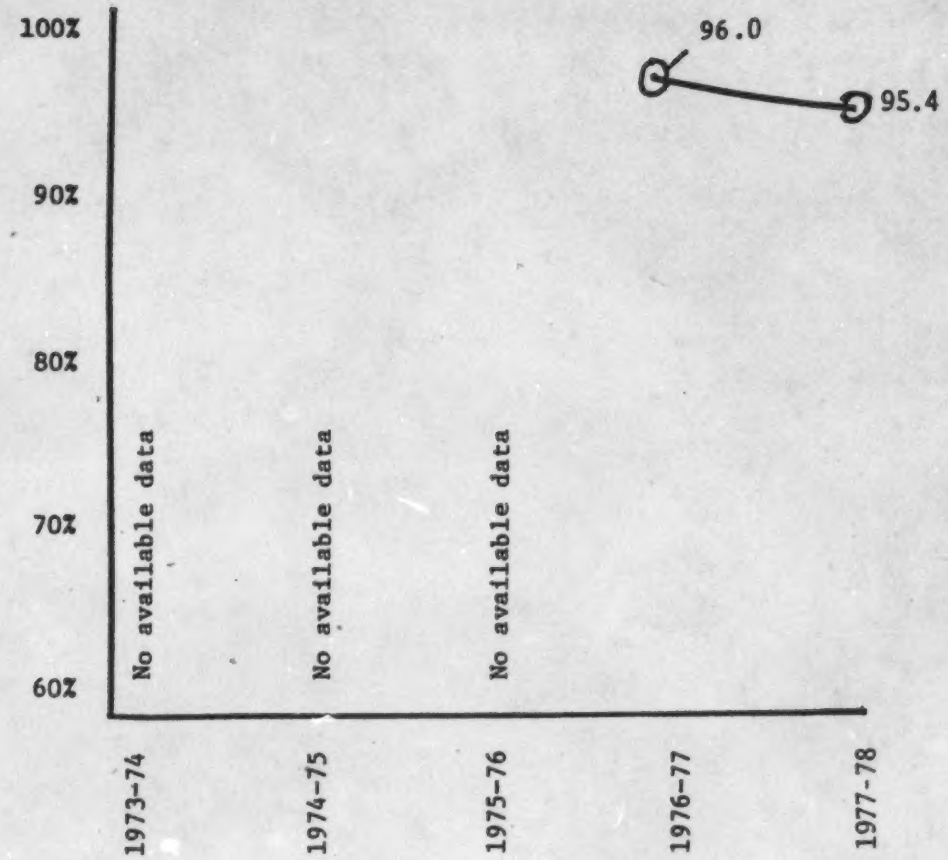

Figure 2

Percentage Attendance of Hutterite Pupils in Total in the Cardston School Division No. 2 1973-74 through 1977-78

1977-78, the basic data provided show a consistently high percentage record from month to month. We expect that there are in-built reasons other than the ECRI training program responsible for the high percentage attendance of pupils in the Hutterite schools.

Cardston Elementary School

Figure 3 presents graphically the percentage attendance of the Indian and Other sub-groups in the Cardston Elementary School, 1973-74 through 1977-78. The percentage attendance of the Indian pupils in this school dropped from 82.0 in 1973-74 to 78.4 in 1974-75, then rose to 83.4 in 1975-76, to 85.0 in 1976-77 and to 85.2 in 1977-78. The direction for this sub-group has been upward since 1974-75.

During the same years, the percentage attendance of the Other sub-group followed a similar, though less pronounced pattern. The percentage attendance dropped from 93.2 in 1973-74 to 91.9 in 1974-75, rose to 94.5 in 1975-76, to 96.0 in 1976-77, then dropped to 94.7 in 1977-78. This represents an increase in percentage attendance from 93.2 in 1973-74 to 94.7 in 1977-78, an increase of 1.5 percentage points.

The increase in the percentage attendance of the Indian sub-group from 1974-75 through 1976-77 was greater than that of the Other sub-group--6.6 as against 4.1 percentage points. Whatever factors have influenced the

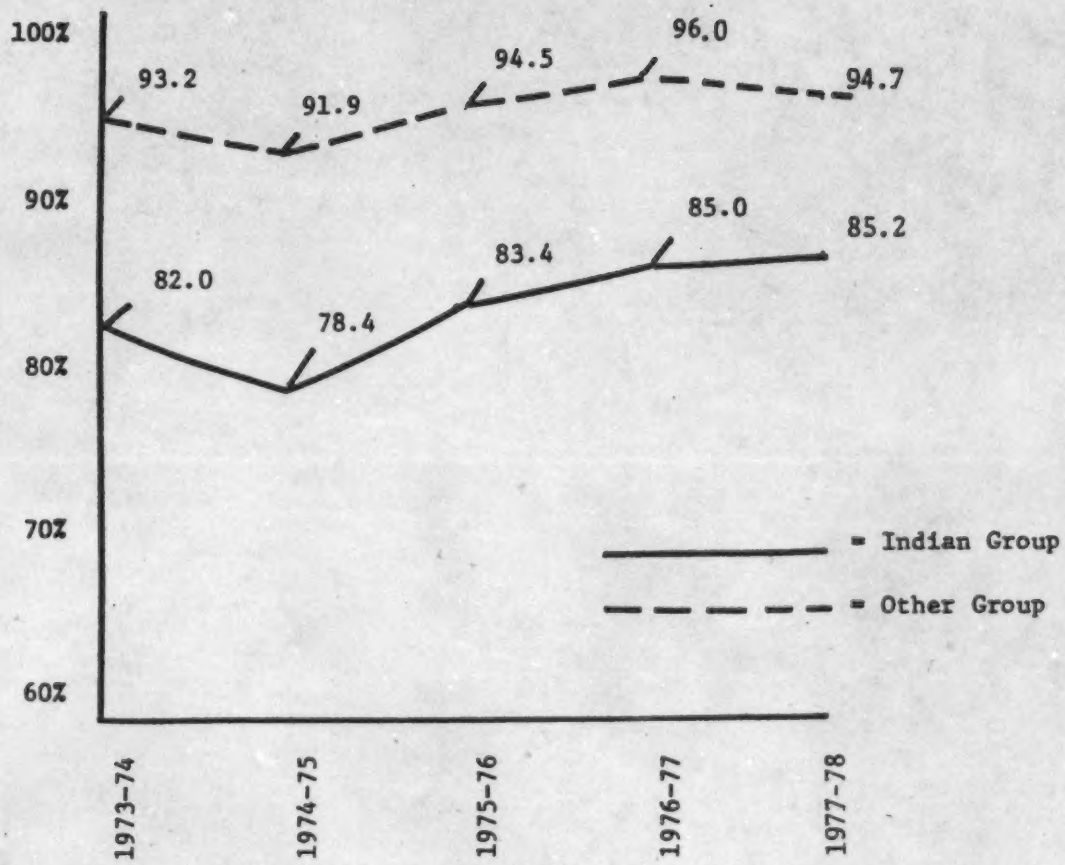

Figure 3

Percentage Attendance of Indian and Other Groups in the Cardston Elementary School 1973-74 through 1977-78

percentage attendance of the Indian and Other sub-groups in this school, it has been greater for the Indian than for the Other sub-group. This is not unexpected since the percentage attendance of the Other sub-group was already relatively high.

Magrath Elementary School

Figure 4 presents graphically the percentage attendance of the Indian and Other sub-groups in the Magrath Elementary School, 1973-74 through 1977-78. The percentage attendance of the Indian sub-group in this school dropped from 84.5 in 1973-74 to 67.9 in 1974-75, rose to 77.4 in 1975-76 and to 87.7 in 1976-77, then dropped to 84.6 in 1977-78. The 1977-78 percentage attendance of 84.6 compares with the 84.5 figure of 1973-74.

During the same years, the percentage attendance of the Other pupils in this school followed a different pattern. The percentage attendance of this sub-group rose from 93.3 in 1973-74 to 95.7 in 1974-75, dropped to 95.2 in 1975-76, rose to 96.4 in 1976-77, then dropped slightly to 95.3 in 1977-78. Variations of this order are to be expected from year to year. The small number of Indian pupils in this school is undoubtedly a major factor in the more noticeable differences in the percentage attendance pattern of the Indian sub-group.

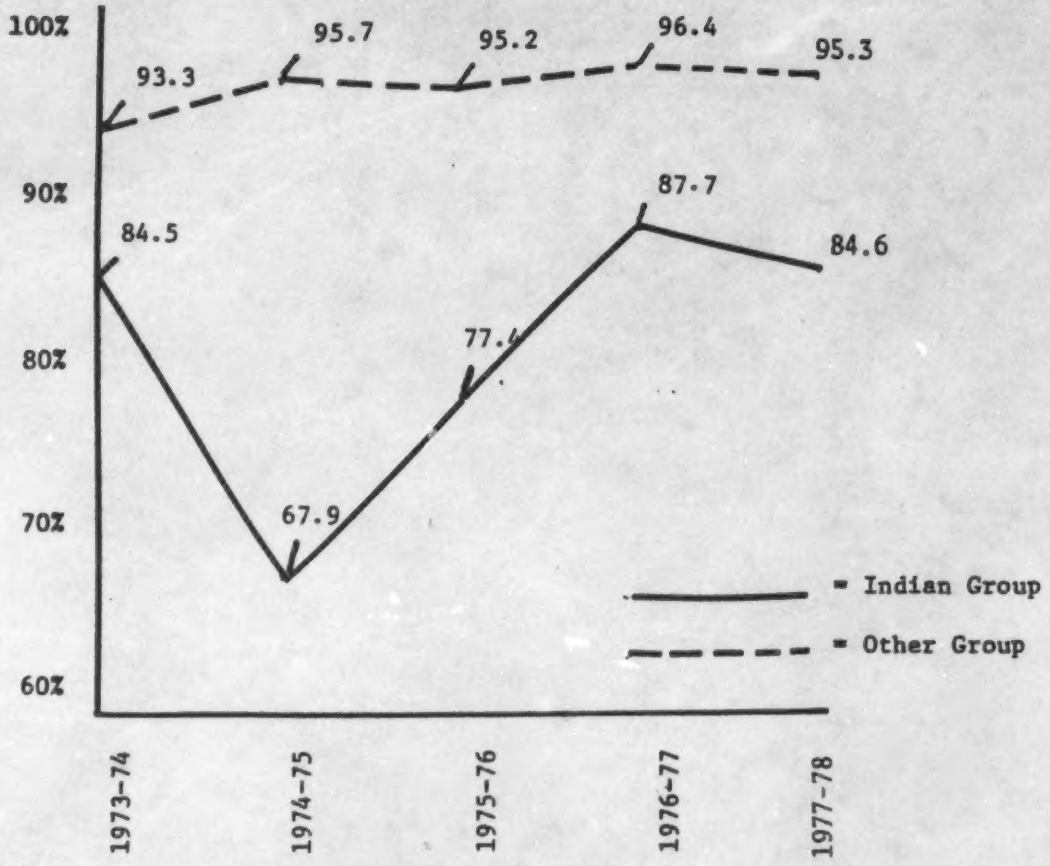

Figure 4

Percentage Attendance of Indian and Other Groups in the Magrath Elementary School 1973-74 through 1977-78

Glenhill School

Figure 5 presents graphically the percentage attendance of the Indian and Other sub-groups in the Glenhill School, 1973-74 through 1977-78. The percentage attendance of the Indian sub-group in this school rose from 82.4 in 1973-74 to 84.1 in 1974-75, dropped to 78.2 in 1975-76, rose to 82.2 in 1976-77, and dropped back to 78.0 in 1977-78. This represents a decrease of 3.4 percentage points from 1973-74 to 1977-78.

During the same period, the percentage attendance of the Other sub-group dropped from 94.8 in 1973-74 to 93.6 in 1974-75, to 92.7 in 1975-76, rose to 93.7 in 1976-77, and remained constant at 93.7 in 1977-78. The attendance pattern of the Other sub-group in this school shows only variations that might be expected from year to year.

These data do not follow the same pattern as did those in the Cardston and Magrath elementary schools, nor the pattern of the totals for the Indian and Other sub-groups.

It would be risky to draw any firm conclusions from these data. Actually, the changes between 1973-74 and 1977-78 are minimal for both sub-groups, though the patterns are slightly different.

Del Bonita School

Figure 6 presents graphically the percentage attendance of the Other sub-group in the Del Bonita School,

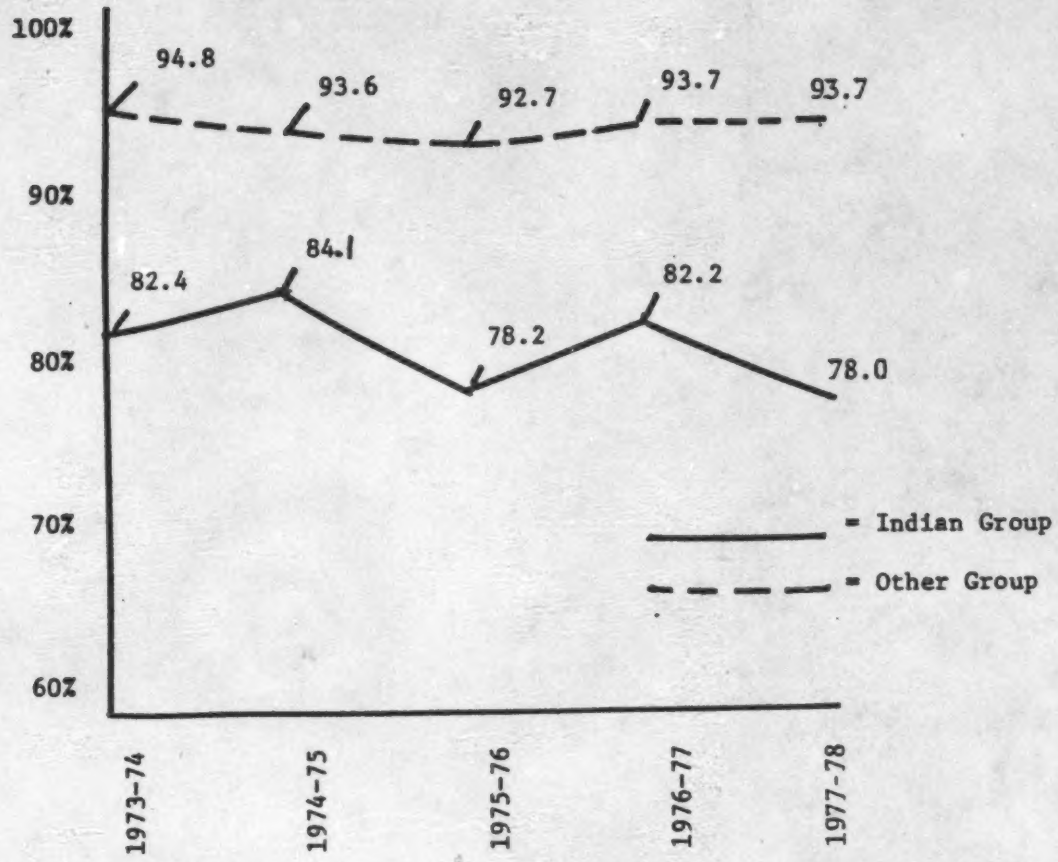

Figure 5

Percentage Attendance of Indian and Other Groups in the Glenhill School 1973-74 through 1977-78

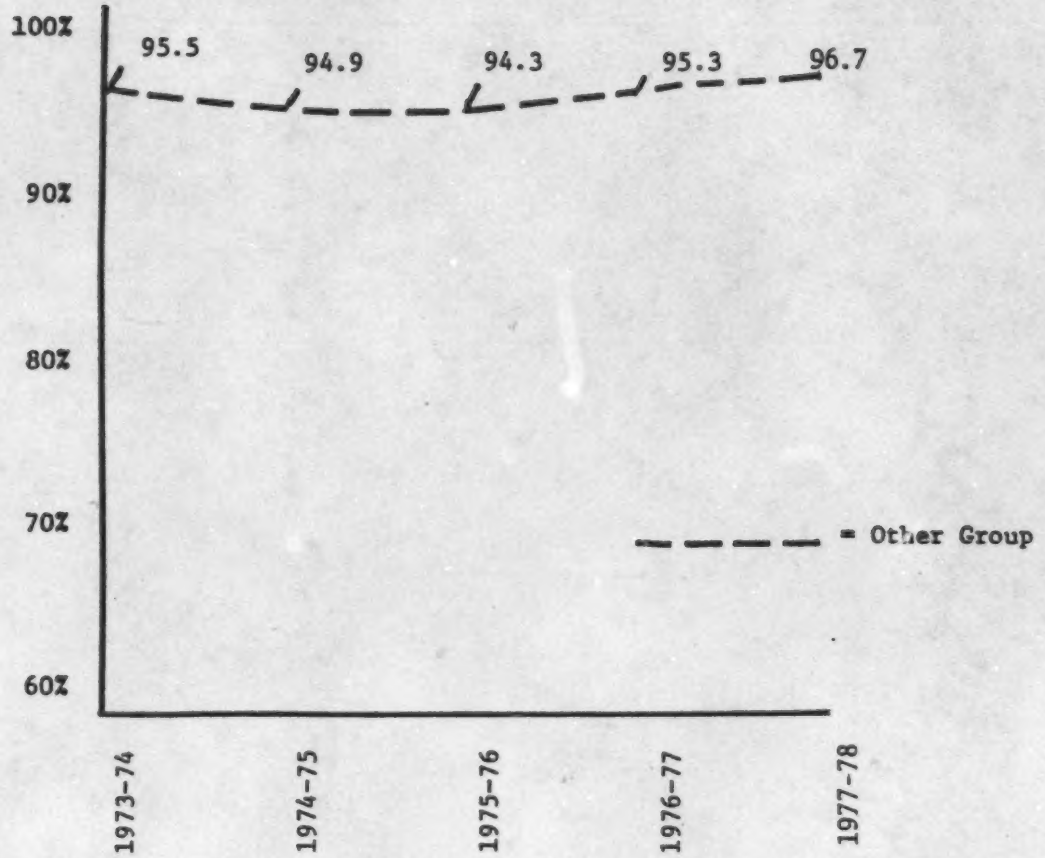

Figure 6

Percentage Attendance of Other Group
in the Del Bonita School
1973-74 through 1977-78

1973-74 through 1977-78. No Indian sub-groups were reported as attending.

The percentage attendance of the Other pupils in this school dropped from 95.5 in 1973-74 to 94.9 in 1974-75 to 94.3 in 1975-76, then rose to 95.3 in 1976-77 and to 96.7 in 1977-78. All changes were small with no apparent trend. There was an overall rise of 0.2 percentage points from 1973-74 to 1977-78, but this size of variation could well be anticipated in the percentage attendance pattern of any school. We would not venture further comment about the percentage attendance pattern of this school.

Mountain View School

Figure 7 presents graphically the percentage attendance of the Other sub-group in the Mountain View School, 1973-74 through 1977-78. No Indian pupils were reported as attending this school.

The percentage attendance of the pupils in this school dropped from 96.3 in 1973-74 to 96.0 in 1974-75, rose to 96.4 in 1975-76, then dropped slightly to 96.3 in 1976-77 and to 95.5 in 1977-78. All changes were minimal with no apparent pattern. The attendance pattern in this shcool, as in the Del Bonita School, shows marked consistency from year to year. Again, we would not venture further comment about the attendance pattern of this school.

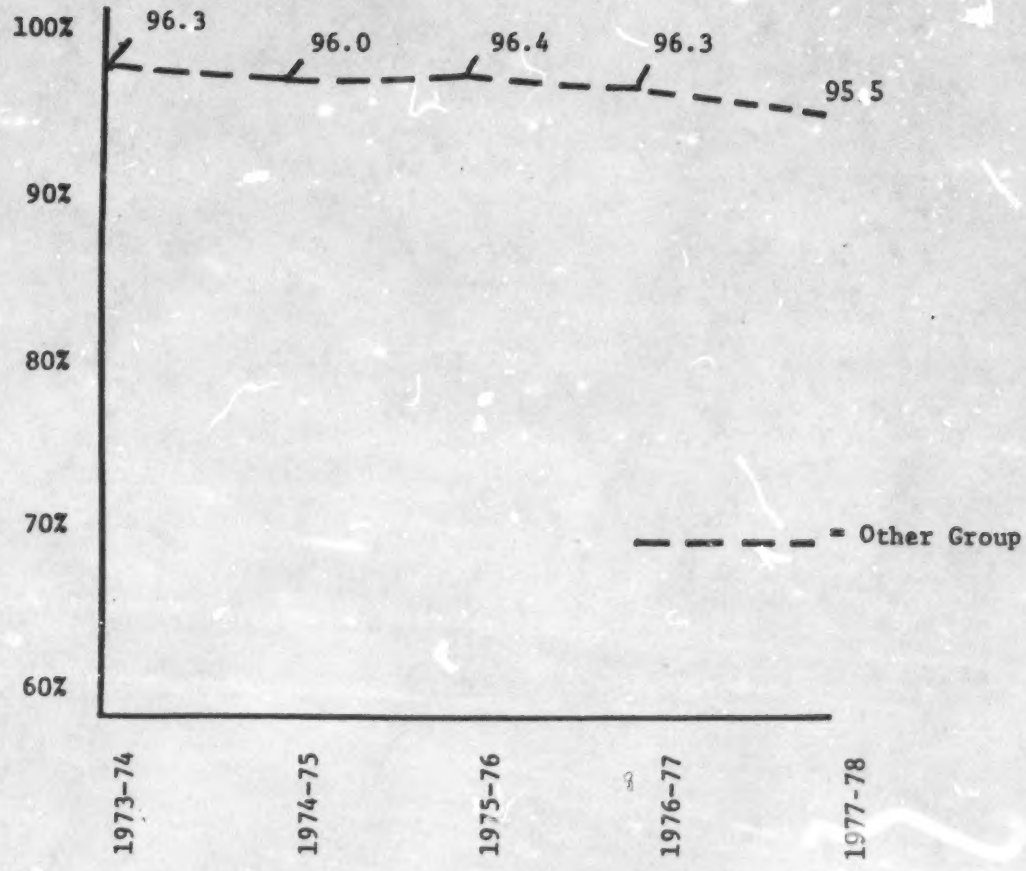

Figure 7

Percentage Attendance of the Other Group
in the Mountain View School
1973-74 through 1977-78

General Observations

1. While there are fluctuations in the percentage attendance from year to year, no overall trends are apparent.
2. The percentage attendance of the Other pupils in the Glenhill, Del Bonita and Mountain View schools showed little varation from 1973-74 through 1977-78. It was maintained at a rather consistently high level.
3. The percentage attendance of the Hutterite pupils was maintained at a consistently high level from month to month and, for 1976-77 and 1977-78, from year to year.

PART IX

GENERAL OUTCOMES OF THE PROJECT

The studies made by the external evaluation team showed that the ECRI Training Program has affected the teaching procedures, performance and styles of the Cardston School Division elementary school teachers. There is strong evidence that, in practice, those teachers observed are in general faithful to the ECRI Training Program. Pupil retention as measured by repeated administration of mastery tests after the passage of time remained high. Speed of learning appeared to have increased.

On the basis of the achievement and self-concept tests administered by the Cardston School Division, there is little or no evidence of pupil development in reading and language other than might be expected normally from year to year. Over the three years 1975-76 through 1977-78 the educational offerings in the language arts did not seem to have effected strikingly large gains or losses in results on the tests used.

The use of language in applied writing assignments showed slight gains in quality of expression, slight losses in the mechanics (spelling, punctuation, and grammar and

usage). There is insufficient evidence to relate these changes to the ECRI Training Program.

The study on handwriting showed no apparent differences for the pupils studied in Grades IV and VI (1975-76) and Grade VI (1977-78).

The study on percentage attendance of Cardston School Division elementary school pupils showed no overall trends, nor did there appear to be changes other than one might expect from year to year.

The parent questionnaire and parent and teacher interview studies complete at the end of the second year of the project showed general satisfaction with the Language Arts Improvement Program, with the schools, and with the teaching staff. A general conclusion was that the individual teacher makes the biggest difference in the educational development of the pupils. Various reservations and criticisms of parents and teachers were presented in the 1977 report.

There is some evidence of outcomes other than those related to teacher performance and pupil achievement and self-concept development. A study related to such outcomes forms part of the 1978 report. Among the most important outcomes other than those measured by formal observation and testing were opinions that there was greater pupil interest and involvement in reading and language activities at home, greater acceptance by pupils of responsibility for their own learning, and integration

of both Indian and Other pupils in classroom teaching/ learning situations.

Above all, the project has focused attention on the importance of the language arts and the need for ongoing emphasis on curriculum planning and program development related to them.

PART X

RECOMMENDATIONS

The external evaluation team recommends:

1. That in any future evaluation of the overall effects of the ECRI training program a more powerful evaluation design be developed. Such a design should include both an experimental group of teachers and pupils who use the ECRI approach and a comparable control group who do not. Preferably these experimental and control groups should be randomly selected from the same population in Canadian schools.
2. That a future comparison of overall growth be made by dividing both experimental and control groups into stratified sub-groups of high, average, and low ability as measured by pretest achievement testing. Then, using the breakdown by grade and ethnic group, the Division would have a more rigorous indicator of the effects of the ECRI training program on pupils, not only by grade and ethnic sub-groups, but also by achievement rankings.
3. That the Cardston School Division continue to examine its approaches to curriculum, program and teaching procedures in the language arts to find why some are

more successful than others and to modify the approaches in light of these findings.

4. That teachers in the Cardston School Division be encouraged to integrate into their teaching techniques and teaching styles those features of the ECRI training program that they have found effective in practice, the degree to which they do so depending on the personal and professional approach of each individual.